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ANALYSIS OF MAJOR FACILITY SITING PROCESSES WITH RECOMMENDATIONS FOR MONTANA

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ANALYSIS OF STATE MAJOR FACILITY SITING PROCESSES; WITH RECOMMENDATIONS FOR MONTANA

by

KEVIN JAY HART

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A professional paper submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF PUBLIC ADMINISTRATION

with concentration in

Natural Resource Management

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January, 1980

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VITA

Kevin Jay Hart was born August 18, 1955 in Billings, Montana. Son of John R. and Shirley Y. Hart, he grew up and attended both elementary and secondary schools in Billings. Kevin graduated from Billings West High School in June of 1973.

During the following summer Kevin applied to and was accepted by Montana State University, Bozeman, Montana. Interested in law, he undertook the prelaw option within the Department of Political Science. In June 1977, Kevin graduated with a Bachelor of Arts degree from that department. Deciding to continue his education at Montana State University, he enrolled in the Public Administration Program. Concentrating his administration studies in Natural Resource Management, Kevin graduated with a degree of Master of Public Administration during winter quarter of 1980.

Kevin plans to continue his education by enrolling in a law school somewhere in the Pacific Northwest during the 1980 academic year. He plans to concentrate in the area of Natural Resource law.

TABLE OF CONTENTS

Page

VITA ii
TABLE OF CONTENTS iii
LIST OF TABLES vi
LIST OF FIGURES vii
ABSTRACT viii
INTRODUCTION 1
  Introduction to Terms 2

Chapter

1. MONTANA SITING POLICY—AN OVERVIEW 6
  The Development of an Environmental Policy 8
    A. 1972 Montana Constitution 9
    B. Montana Environmental Policy Act of 1971 10
    C. Montana Administrative Procedures Act 11
    D. Air and Water Pollution Controls 11
    E. Montana Major Facility Siting Act 12
  Identifying the Problems with Montana's Siting Process 13
    A. The Problem of Duality 13
    B. The Reactive Problem Defined 14
  Scope and Limitations of This Report 15

2. ESTABLISHMENT OF SITING POLICY FRAMEWORK 17
  Institutional, Legal, and Policy Considerations 17
    A. External Considerations 18
    B. Internal Considerations 19
    C. Montana's Experience 19
  The Siting Dilemma 20
    A. Siting: An Historical Perspective 20
    B. Defining the Siting Dilemma 22
  Controlling Policy 22
    A. Defining Policy 22
    B. Policy Coordination 23
    C. Choosing a Decision Mode 24
    D. Cost and Benefits of Planning 25
    E. Developing a Planning Model 26
  Siting Approaches 29
    A. Dimensions of Siting 30
    B. Integrating the Dimensions of Completeness and Centralization 32
  Criteria for Assessing a Siting Process 33

Page

3. DEVELOPMENT OF A 'MODEL' SITING PROCESS 35
  A Complete Proactive Siting Approach 35
    A. Phase I: Planning 37
    B. Phase II: Certification 42
    C. Phase III: Monitoring 44
  Approaches Taken By Other States 45
    A. State Planning 45
    B. State Decision Making 49
    C. State Monitoring and Compliance 52

4. ANALYSIS OF STATE SITING PROVISIONS 54
  Analysis of Elements and Components 54
    A. Phase I: Planning Provisions 54
    B. Phase II 60
    C. Phase III 64
  Factors Affecting the Choice of Elements 66
    A. Funding. 66
    B. Covered Facilities 69
  Unanswered Questions 69
    A. Forecasting 69
    B. Public Participation 70
    C. Criteria 70
    D. Judicial Review 71
    E. Monitoring 71
  Comments 72

5. RECOMMENDATIONS FOR IMPROVING MONTANA'S SITING PROCESS 73
  Analysis and Implication of Amendments 73
  Improving Montana's Siting Process 75
    A. Phase I: Planning 75
    B. Phase II: Certification 80
    C. Phase III: Monitoring 83
  Conclusion and Recommendation Summary 84
  Conclusion 87

FOOTNOTES 88
  Chapter 1 89
  Chapter 2 96
  Chapter 3 104
  Chapter 4 112
  Chapter 5 121

Page

APPENDICES 123
  Appendix 1–Ford Foundation Project and Study 124
    Nature of the Project 124
    Task B 124
    Methodology 125
  Appendix 2–Siting Questions 128
  Appendix 3–Guide to Siting Summary 130
    Table A–Categories of statutory control over major facility in the fifty states 131
    Table B–Facility Coverage by Each State 133
    Table C–Siting Law Provisions
      C_1–Decision Authorities 135
      C_2–Time Limits 136
      C_3–Forecasts and Site Acquisition 137
      C_4–Participation and Appeals 138
      C_5 Criteria Types and Funding Sources 139
  Appendix 4–Montana's Siting Procedures and Information Requirement 140

LITERATURE CITED 144

LIST OF TABLES

Table Page

State Siting Provisions

State Siting Provisions 47
Other Planning Provisions 48
Decision Phase. 50
Monitoring Elements. 53

Certification Provisions

Decision and Support Agencies 62

LIST OF FIGURES

Figure Page

1. Basic Planning Model....................27
2. Siting Flow Model....................28

ABSTRACT

The recent proliferation of major facility siting activities is a response to the problems associated with past reliance on market forces to locate energy and other major industrial developments. States have become increasingly unwilling to abide the consequences of market decisions which deplete common pool resources and pollute public goods, like air and water. However, contemporary siting literature tends to stress a single uncompromising comprehensive approach to effective siting design without reference to the pluralistic governmental system that often dictates what types of resource regulation are acceptable in various states. This stress is at the expense of equally important issues such as factors of institutional design and degrees of centralization, completeness and coordination.

Siting provisions can be grouped into categories which reveal different assumptions and goals about the siting process. Such groupings make explicit the assumptions implicit in rules of siting procedure and suggest ways in which a state can create a structure most consistent with assumptions about the appropriate degrees of necessary centralization, completeness and coordination--factors often overlooked in the comprehensive approach.

The author concludes that siting questions are most effectively dealt with through a flexible system that recognizes both external and internal constraints. Flexibility is enhanced by a proactive mode that diminishes market forces in favor of collaboration of all policy actors and utilizes planning as a decision making tool. Development of a model process and analysis of existing siting procedures in other states suggest conclusions about strengths and weaknesses of various provisions. An application of these findings is provided by suggesting revisions to Montana's siting process in light of the conclusions reached.

INTRODUCTION

The establishment of governmental procedures for siting major facilities has become a major area of state legislative concern during the past decade. This activity is a response to our increasing awareness of the environmental impacts attributable to energy and other major industrial facilities. National recognition of the environmental tradeoffs associated with resource development can be traced to the passage of the National Environmental Policy Act of 1969 (NEPA), which expresses a national mood favorable to environmental protection. In addition, many states have directly addressed the problems associated with industrial development by creating a proliferation of environmental regulatory mechanisms, including land use statutes, facility siting acts, etc.

To one degree or another most states have now imposed strong regulatory procedures. Indeed, there is a distinct possibility that eventually every state may adopt such siting tools, though it is also likely that each state will adopt a unique combination of different control mechanisms. This is because the states differ widely on matters of economic and environmental priorities. Moreover, in each case the procedures chosen to certify or permit major facility construction will reflect different assumptions about the proper role of the key actors in any siting process; industry, agency experts, elected officials, citizens, etc. Any proposed siting process must accommodate these if it is to be acceptable to the participants in the state and ultimately deemed effective.

One of the major purposes of this paper is to analyze the various underlying policy assumptions reflected in existing state siting procedures, and to categorize them systematically. Suggestions will then be made about appropriate regulatory structures for meeting unique state priorities.

Introduction to Terms

Major facility siting is essentially a formal decision making process. In general, there are two distinct types of decision making employed in state siting, the *reactive* and the *proactive* modes. A reactive mode is one that responds to the initiatives of industry. A proactive type of decision implies prior constraints on industry decisions that reflect public priorities. Thus, the distinction is one of the degree to which market forces are permitted to set the direction of industrial development.

Another distinction between modes is the use of planning as a decision tool. This is illustrated by the increasing reliance on planning in assessing coal mine projects. The early environmental impact statement (EIS) was concerned with the impacts of a single project. Problems arose because the independent project EIS could not adequately deal with impacts of a series of projects in the same area. Indeed, the impacts of a single strip mine were often evaluated independently from those of an adjacent mine site scheduled for operation several years in the future.

To address these inherent problems the programatic EIS was developed. This document sought to review all parts of a multifaceted project through one statement. Problems occurred, however, when it became increasingly difficult to access cumulative impacts over the life of the project.

The final stage of EIS development involves the technical assessment which seeks to analyze cumulative impacts in terms of maximum value and minimum harm. This utilizes a planning framework to measure, evaluate, and assess cumulative impacts of a proposed project from the outset.

Planning implies a diminution of market forces in favor of collaboration of all public policy actors. In the EIS example, the project assessment involved heavy reliance on market factors, while the technical assessment relied less upon market influence. This distinction can be used to define the two decision modes. The reactive mode implies a greater dependence on market forces, where the private sector assumes the major siting role. Conversely, lesser market influence is exerted through the proactive mode which relies on greater input from public policy actors. Now a more detailed analytical breakdown of decision processes is possible.

Contemporary siting literature tends to stress the importance of a comprehensive or centralized decision making system for handling siting questions. This stress is often at the expense of considering other equally important issues. This paper argues that comprehensiveness should include three dimensions, e.g., the degree of centralization and the equally important degrees of completeness and coordination.

One of the major pitfalls of siting research is the lack of precise terms. Indeed, the development of a concise siting vocabulary is a project for future research, but for purposes of this discussion the terms centralization, coordination, and completeness have been assigned definitions that describe each according to degrees.

The term *centralization* can be used to describe the type of decision authority, i.e., what type of agency is given siting responsibilities. This implies that a single agency or a variety of public agencies can be empowered to make decisions or have input into major facility siting analysis. And while the virtues of centralization vs. decentralization can be discussed, choice is often limited by factors within a state. Analysis must focus on different decision structures that are more centralized or less centralized.

Completeness helps identify the extent of analysis done on key questions. In effect, a siting decision can be discussed in terms of how complete it is in light of the chosen decision mode. Different modes allow varying degrees of analysis and evaluation on a set of important key questions in determining the appropriate size, type, location, et cetera, of a facility. In this effort a set of essential elements and components are developed to measure completeness.

Coordination links the factors of centralization and completeness by integrating them under one process. This involves a mechanism such as a siting act which establishes a structural decision framework. Siting decisions are made according to the type of mode chosen, as influenced by the above factors, and reflect relevant state situations and characteristics.

An inherently pluralistic system of state governmental organization is not conducive to simple application of comprehensive siting methods. But, based upon coordinated statutes and decision bodies, a plural siting approach can take into account existing governmental structures and situations. The adoption of an effective process depends not on extensive governmental reorganization, but the adaptation of existing structures to the needs of an adequate siting process. A model of such a process is developed in this paper. This model relies upon certain precepts of institutional design to address problems of making effective siting decisions.

The basis of the model is an ideal proactive decision mode. It establishes a three phase process for assessing key siting questions. Other states' siting provisions can be analyzed in light of the model to determine their strengths and weaknesses. From this discussion conclusions about movement from reactive to proactive decision modes can be drawn. A brief summary of those conclusions follows.

First, among the fifty states there is an overwhelming reliance on pluralistic mechanisms of control. Therefore, siting design should not focus on the development of totally new institutional structures, but direct attention at adapting existing structures and the resolution of inherent conflicts. Institutional design is a major and necessary part of this research.

Second, existing reasons for choosing between reactive and proactive modes have not been explored. Unfortunately, they cannot be analyzed in this paper either. However, some assumption can be made, and the resulting conclusions suggest that planning is an important factor in resource decisions. Accordingly, the proactive mode is best suited for siting decisions from an overall resource management perspective.

Finally, the siting nemesis remains in the development of criteria to assess and to weigh key environmental and other variables. Future discussions must focus on the role of public participation, technical assessments or conclusions, and on how to develop and weigh any assessment standards. These issues have been raised in this paper and weaknesses have been identified. However, criteria have been devised to help in the measurement of the factors of effectiveness and efficiency in the study of existing siting processes. This is the first step in designing correct institutional responses to the problems of major facility siting.

Chapter 1

MONTANA SITING POLICY—AN OVERVIEW

Due to the abundance and variety of natural resources, Montana has been called the Treasure State. However, geographic location and relative isolation have destined the state to be a raw materials producing state rather than an industrial one.[1] This reliance on natural resource production presents serious environmental problems. For example, air and water can be considered public goods. They can be utilized by all citizens of the state, but no specific property rights exist. The development of Montana's resources involves problems of externality, i.e., the benefits of resource development are concentrated in the hands of a few, while the associated costs in terms of air and water quality are greatly diffused. Thus, without institutional arrangements to deal with the problems associated with energy or other industrial development, private benefit is often achieved at a social cost.

The theory of political economy helps explain this type of behavior. In terms of economic theory, people are constantly faced with opportunity costs. When the relative cost of a good changes, people respond by consuming more or consuming less of that good.

> "Put most simply, the more a person has to give up to obtain each unit of good, the less of that good will be demanded. This is known as the first law of demand. . . . Further, the law of diminishing marginal utility implies that the more of a good a person has, the less he would be willing to give up of other goods for an additional unit."[2]

For an environmental good such as air and water quality, people will act the same way. Therefore, institutional arrangements must be designed to impose full social costs upon resource developers in order to preserve the quality of public goods.

Efficient management of resources hinges on the difference between the costs and benefits which accrue through environmental management. Thus,

> ". . . successful management depends largely on the ease with which institutional devices to protect resources can be designed and applied. Resources will be effectively managed when the returns from such management are greater than the costs. . . ."[3]

The question becomes one of designing the appropriate type of institutional framework, which will guide behavior through a system of environmental rewards and punishments.[4]

Today, Montana is a model state in many areas of environmental protection. The development of these policies is important background for facility siting in the state. Regulation of major facilities enables a state to guide growth and to reduce associated impacts of resource development. However, an effective siting mechanism which will maximize social welfare depends upon the design of review procedures which ensures that key questions are answered. These questions include: (a) Is it needed? (need assessment), (b) Is it the appropriate size and type of facility? (i.e., alternatives considered), (c) What are the impacts? (the full review of social, economic and ecological impacts), and (d) Does it continue to meet the standards? (the use of monitoring to ensure continual compliance with governmental certification standards). The focus of this paper is to review the important considerations of a siting process; to identify and to develop the necessary elements and components of an effective siting process; and recommend changes to Montana's Major Facility Siting Act. The rest of this chapter discusses the background of Montana's environmental policy and the current problems with and the future concerns for the state's siting process.

The Development of an Environmental Policy

The combination of political and economic power has dominated Montana's resource development and greatly influenced its resource policies.

> "From its organization as a separate territory in 1865 (following discovery of gold at Bannack, Alder Gulch, and Last Chance Gulch) to the present, the Treasure State has known in kaleidoscopic intensity the experiences in economic development and politics which elsewhere occurred over greater periods of time. If benefit was derived from the political and governmental experience of other commonwealths, it is not often apparent from reading either the history of Montana or its constitution."[5]

A series of resource development trends can be traced throughout Montana's history.[6] The development of the state's resources has resulted in separate political and economic strongholds.[7] Thus, the political development can be viewed as a series of "politics"; the politics of resources, for example, the politics of copper, the politics of timber, the politics of cattle, et cetera.[8]

Until the early 1960s, the political and economic power of the different politics was so deeply entrenched in Montana's economy that any change against their best interests was resisted.[9] In addition, the state of governmental affairs was extremely slow and unworkable.[10] Factors of state and national significance formed the basis of changing resource structure for the state.[11]

Recognizing, for the first time in Montana's history, the dependency of man on the environmental life support systems, the 42nd Legislature approved a system of controls for the management and development of natural resources. These actions initiated a new era in Montana resource policy and politics. In order to understand

Montana's position on facility siting, one must look at several interconnected statutes and actions.

A. 1972 Montana Constitution

Existing governmental structure and authority were not conducive to a sound state policy in natural resource development. To address this problem, two steps were undertaken: the adoption of a new state constitution, and executive reorganization.

Effective since 1972, the new state constitution provides that: "All persons are born free and have certain unalienable rights. [These] include the right to a clean and healthful environment, ..."[11] The protection of this right is further strengthened by providing as a duty of the state and its citizens the protection and improvement of the environment.[12] In addition, the constitution ratified the 1970 executive organization of the governmental structure.

Executive reorganization of one form or another had been contemplated for several decades. Six major reorganizational studies all identified similar problems in Montana's governmental structure. Yet few, if any, recommendations to correct these defects were ever adopted. The common thread linking all of the studies was the expressed need for a long range plan of reorganization to provide a sense of direction.[13] With the adoption of the new Constitution, reorganization was accomplished. By constitutional mandate the Legislature and the Governor enacted the Executive Reorganization Act of 1971, creating nineteen new departments; establishing a basic structure for the departments and the executive branch, defining the duties and functions of each; and giving the governor activation powers to implement the new structure of government.[14]

B. Montana Environmental Policy Act of 1971

The preoccupation of the 42nd Montana Legislature with the quality of the natural environment can be attributed, at least partially, to the passage of the National Environmental Policy Act. This reflection of a national awareness resulted in the passage of the Montana Environmental Policy Act of 1971 (MEPA), and signalled the beginning of a new era for the state, one of environmental conservation.[15]

MEPA mirrors its federal counterpart, the National Environmental Policy Act. Montana's Act includes the same basic requirements for the environmental impact statement, and establishes an Environmental Quality Council that is required to submit an annual report to the Governor and Legislature. However, there are two major differences. First, while the National Act speaks of promoting environmental quality, it does not assert a legally enforceable right for a clean and healthful environment. Conversely, MEPA does guarantee a clean and healthful environment for its citizens today and in the future by establishing a mechanism through which the state may carry out its environmental protection duties. Secondly, Montana's Act also provides a system of fees to be charged by the agency conducting the impact statement analysis to pay the costs of environmental review.[16] MEPA has promoted many of its legislative goals through an increased environmental awareness by state agencies.[17]

C. Montana Administrative Procedures Act

Governmental reorganization spawned a concern for reform and standardization of the state's administrative procedures. In 1969, the Montana Legislative Assembly officially recognized the need for reform in this area and by joint resolution directed that a study be done on the feasibility of coordinating administrative procedures. The legislature felt that reorganization would be incomplete without a mechanism for coordinating and controlling agency decision making. The outcome was the Montana Administrative Procedures Act, referred to as MAPA.[18]

MAPA also mirrors its federal counterpart, the Federal Administrative Procedures Act. The focus is on three basic aspects of administrative law and procedure: agency rule-making, agency adjudication and judicial review of agency decisions. MAPA guides agency decision making and establishes a framework of procedures in any agency action. Thus, all agency decisions must be made according to the procedural requirements of MAPA.[19]

D. Air and Water Pollution Controls

Various amendments over the years have shaped Montana's Air and Water Acts to reflect the state's concern for protecting the health, safety and quality of environment for its citizens. As a result, each of the state's acts– the Montana Clean Air Act[20] and the Montana Water Pollution Control Act,[21]–are effectively stronger than their federal counterparts.[22] The Division of Environmental Sciences, Department of Health and Environmental Science (DHES), among other duties, is responsible for air and water pollution control.[23] Before a major facility may be constructed, the necessary air or water pollution discharge permit must be secured from the respective bureau within the DHES.[24] The strength of Montana's Air and Water Acts is important since they are key considerations in determining air and water quality during Montana's siting process.[25]

E. Montana Major Facility Siting Act

Relying on Article IX of the state constitution, the legislature passed the Utility Facility Siting Act of 1973.[26] As the name implies this act was limited to certain utility facilities, most notably electric power generation plants. However, in 1975 the Act was expanded to include most major types of energy generation, or conversion plant sites and their associated facilities. It was also renamed the Montana Major Facility Siting Act.[27] The act is strong in environmental protection information requirements, certification of air and water pollution control, and public participation provisions.[28]

The Act requires that no construction on a new facility may begin "without first obtaining a certificate of environmental compatibility and public need" from the Board of Natural Resources and Conservation (BNRC).[29] To obtain a certificate an application must be filed with the Board. An accepted application is reviewed by other government agencies, and notice of the proposal is published in local newspapers in the affected areas. A proposed facility is reviewed by the Department of Natural Resources and Conservation (DNRC) for environmental compatibility based on its own analysis and input from other state agencies.[30] Upon receipt of the final DNRC report, a hearing is held by the BNRC.[31] The applicant must show clear and convincing evidence that the certificate should be granted.[32]

Identifying the Problems with Montana's Siting Process

Montana has developed both a structural and procedural framework for siting decisions. The siting process does function, however, not as it was intended. This failure is a reflection of the nature of the process. Briefly, the problems can be stated as (1) a duality of authority which places two Departments (Natural Resources and Conservation, and Health and Environmental Sciences) in decision making roles but it does not completely authorize the assessment of cumulative impacts by the Department of Natural Resources in its final decision, and (2) the reactive nature of the siting process; i.e., action on a proposal does not begin until the formal application is filed with DNRC.

A. The Problem of Duality

The duality of authority between the DNRC, the DHES, and their respective boards is highlighted by the Colstrip Case. Proposed by a consortium of utility companies,[33] Colstrip 3 and 4 consisted of two 700 megawatt coal fired generating plants and associated facilities in southeastern Montana at Colstrip. Thirty miles of pipe were to carry Yellowstone River water to the generating site. Two parallel 500 kilovolt transmission lines, stretching over 430 miles from Colstrip to the terminal and interconnection facilities at Hotsprings, in the northwest corner of Montana, were to deliver power to the Northwest power grid. At the time of application in June of 1973, the total estimated cost of the project was $368,000,000, and based on the fee schedule, a filing fee of $1,232,930 was assessed to cover the cost of analysis.[34]

In reviewing the project, the DHES stated that it could not prove that the facility would result in illegal air and water pollution. On that basis, the BHES conditionally certified the Colstrip project. The environmental review done by the DNRC incorporated the air and water quality impacts as well as other environmental factors and recommended that the project be rejected.[35] However, the BNRC went against this recommendation and conditionally approved the project.[36]

Much of the controversy in the Colstrip Case centers around the duplication and overlap of effort between the DNRC, the DHES and their Boards. While the BNRC must issue the certification of environmental compatibility and public need, the BHES is responsible for issuing a construction permit certifying air and water quality. Further, while the individual departments are responsible for the actual review, each Board acts as an independent quasi-judicial body and may accept or reject departmental recommendations as it sees fit. Judicial review has focused on defects of the decision making and review processes of both departments and boards. The project was approved by state and federal agencies during the middle of 1979; however, the project's cost has escalated to a reported $1.5 billion.[37]

B. The Reactive Problem Defined

If anything can be said about the Colstrip Case it is that neither side of the controversy found the siting process to work effectively.[38] Two different perspectives on facility siting have emerged. First on the part of industry, the process is time consuming and expensive. Part of the expense resulted from untimely delays during project review. Secondly, state agencies must regulate, and yet balance, conflicting needs without the benefit of necessary capabilities.

The problem becomes how to streamline the process in terms of cost and time factors, but also strengthen the provisions for complete environmental review and full participation by all parties. Industries, such as Montana Power, feel that streamlining must focus on a reduction in the cost and time factors of the process. Conversely, the state wants to ensure adequate funding for a good, thorough environmental analysis but also to permit a streamlining effort which facilitates increased planning and improved decision making. A statement of the problem in these terms means a strengthened process that includes planning and improved decision making, while cutting down the cost and time requirements needed for the analysis.

The concern for an improved process echoes the problem of the processes' reactive nature as perceived by citizens, state and industry.[39] Under the present system, key questions are difficult to address. It is difficult, for instance, for decision agencies to ask questions about need, type and location of a proposal without a planning framework that allows these questions to be asked and analyzed. The reactive nature of the existing process places the state in an unfavorable decision making position, attempting to ask questions without the tools to answer them. This report explores the development of a framework to resolve many of these problems.[40]

Scope and Limitations of This Report

The development of an effective siting framework to address key questions involves many complex issues that cannot be answered in detail. Differing values and assumptions can dictate outcomes. This report does not explore many of these factors. There is no attempt made to identify everything that is germane to the development of a siting process. For example, the report does not address specific questions of design for different siting elements or their implementation, but necessary components of each element are identified. This involves a combined approach to guide the development of important factors for a model process.

Existing siting literature focuses on two types of analysis. These approaches include those: (a) designed to articulate specific conclusions and solutions based on preselected assumptions for the subject state, and (b) studies designed to provide a broad perspective or areas that have been explored in other siting approaches to date. This paper attempts to combine both methods. First, the discussion will focus on historical perspectives and important considerations from which a model process can be developed. Second, based on analysis of other states and the model recommendations for improving Montana's siting process will be made.

The flexibility of this process provides several options to the state, depending on the extent to which it wishes to adopt the model process. A range of choices based upon options utilized in other states is therefore provided. Recommendations, based upon existing statutory and policy considerations within the state, will be made to indicate where on this range the author feels Montana should move.

The following chapters detail important considerations and the necessary elements and components of a model process.

Chapter 2

ESTABLISHMENT OF SITING POLICY FRAMEWORK

Many states have become increasingly sensitive to the adverse impacts from development of energy and other major industrial facilities. Within the last seven to eight years, twenty-five states have passed a specific facility siting statute. States can also exercise regulatory powers over these major facilities through a number of different federal or state laws and rules or regulations.[1]

Efforts for controlling major facility development are most often aimed at the minimization of adverse impacts to public health, safety or welfare. These efforts must be based on criteria designed to assess the desirable and undesirable impacts of development on the social, economic and ecological components of the human environment.

This chapter explores the intervening factors affecting the performance of a siting process and siting decisions, and the approaches to siting process design. It also establishes a method for evaluating a siting process through a set of assessment criteria designed to measure the attainment of general siting goals developed in the following sections of the paper.

Institutional, Legal, and Policy Considerations

States do not have direct control over all of the factors which pertain to siting. Consideration has to be given to regional and national needs, reflected in state and federal policies, and to the opinions, values, and political power of important groups within the state. This allows decision makers to assess a broader range of issues. Through a broader perspective it is possible to more accurately assess and legitimately accept or reject a proposal on the basis of the key questions of need, alternatives and impacts. Weighting of external and internal factors is a difficult task. Two types of external considerations affecting state siting decisions are federal and regional factors.

A. External Considerations

Federal ownership and preemption both cause problems when a state attempts to develop a rational siting process but is hindered by federal actions which subvert or contradict expressed state objectives. Thus, without some means of exercising control over federal lands within its jurisdiction and input before federal preemptory powers are exercised, any attempt by a state to implement an efficient and effective, in terms of time, cost and decision making, siting process faces uncertainty.

Regionalism and, more specifically, regional commissions have been established to solve common problems that extend beyond the boundaries of individual states. While there is no consensus on what functions should or should not be delegated to regional bodies, the common thread has been an attempt to solve problems of coordination that cross geographic lines. These organizations include Commissions on River Basin Planning, and Commissions for Regional Economic Development which disseminate regional information on a multiplicity of topics.[2]

Regional bodies can also be useful in dealing with federal and regional siting problems. The concept of regional coordination may also be applied in terms of regional unity. Thus, one counter to the problems of federal power is the establishment of a regional body to promote the interests of participating states through input into federal policy process.[3] The current mode in federal-regional-state relations appears to function through a system of cooperation.[4] Indeed, the Western states have much to comment on, since they will share many of the problems associated with energy resource development in the future.[5]

B. Internal Considerations

The most important internal siting consideration is the precedent of general policy. The workability of a siting process revolves around how well the process is understood and accepted by those who must participate. In the past, there have been only two participants; state and industry. For various reasons, the public was excluded from the decision process.[6] But the desirability of public involvement in decision making processes, for all types of state regulatory matters, has now been recognized.[7] In facility siting, both public and private interest input can be used to help establish siting policy and to implement a procedural siting process.[8]

C. Montana's Experience

Balanced attempts to provide effective state management tools are often thwarted by conflicting state and federal policies. Montana's development/environmental policy relationship can be described as one of controlled growth coupled with strong environmental protection measures. Conversely, stated federal policies stress a more rapid development of the state resources. Coal is a prime example. Disparities between federal and state agency attitudes toward impact statements and subtle disagreement on basic resource management policies results in the rejection of a cooperative effort in environmental analysis.[9]

Although the trend for divergent federal-state views on resource development will no doubt continue, the good faith effort at negotiating opposing viewpoints is important to the reduction of siting uncertainty and inclusion of state input into federal decision making. Without mediation, the prospects of federal preemption looms in the background.[10]

The Siting Dilemma

Siting involves a dilemma of tradeoffs. Realization of the necessary tradeoffs between industrial development and environmental quality is the first step in the mitigation of undesirable effects.[11] These tradeoffs will become increasingly important issues as the United States strives to achieve energy independence.[12] There is little indication that the historic trends of energy consumption will be abruptly reversed.[13] This assumption is borne out by a brief overview of the history of energy siting.

A. Siting: An Historical Perspective

The construction of electrical generation plants is the area that receives universal attention, and is likely to prompt the design of a siting process. While the size and type of electrical power plants regulated varies, almost every state has some process for permitting, certifying, or conditioning these facilities before their construction.[14] Historically, the institutional development of siting follows certain national trends. All legislative siting proposals, state and national, have focused on at least one of the three basic premises: (a) a question of economics; (b) a question of service reliability; and (c) a general issue of environmental quality.[15]

Siting for economic reasons appeared in the early 1960's. As expressed in the Federal Power Commission's *1964 National Power Survey*, problems of the electrical power industry would best be solved by economic coordination and power pooling. The shift in emphasis to economic considerations was viewed as a solution to the problems plaguing the electric power industry.[16]

The Northeast power failure in 1965 shifted the siting emphasis from one of economics to the questions of reliability and adequacy of service. The result of this movement was the development of a body of specialized, highly technical knowledge that was incomprehensible to the average citizen. Siting became the responsibility of the electric power industry.[17]

In the late 1960s another shift occurred, changing the siting emphasis to locational and environmental factors. Power plant siting debates focused on three basic human environments; ecological, economic and social. Efforts were directed at protecting or reducing the adverse impacts of large power plants on these environments. This shift in emphasis also reflected the growing environmental concern that resulted in passage of the National Environmental Policy Act of 1969.

Construction and operation delays due to fragmented and overlaying jurisdictions, in terms of environmental and other utility regulation, began to surface in the early 1970s. These delays were also often compounded by throwback problems with the adequacy of service and system reliability of earlier years.[18] The continued growth of these problems signalled that increased power consumption, industrial development and environmental quality were conflicting objectives.

B. Defining the Siting Dilemma

Regardless of the type of major facility proposed, the siting dilemma becomes a tradeoff between environmental and other factors.[19] Economics and system reliability are still influential arguments. In fact, while environmental factors may take precedence, their weight is often lessened in the face of new and stronger imperatives, the tradeoff between environmental and development factors. The rest of this chapter is devoted to an overview of important state considerations that are necessary to ensure tradeoffs occur beneficially in terms of public goals.[20]

Controlling Policy

The key to an effective siting decision is the development of a siting process which allows tradeoffs to be made within the context of a controlling state policy.[21] Such a context is often expressed as the 'resource umbrella concept' which seeks to include ". . . various resource decisions into a coordinated approach that allows a decision maker to weigh individual project impacts as well as cumulative impacts posed by a series of development projects."[22] State involvement in siting questions is more complex than simply deciding whether or not to regulate adverse impacts of major developments. The test of a siting process' effectiveness depends upon the type of policy under which it was implemented and the choice of decision making tools.

A. Defining Policy

The key to logical siting is refining different perspectives into a clear set of goals and objectives. A controlling policy may already exist but may need to be clarified.

Policy is difficult to define, and can be shaped by a number of factors, including the state's economy, legislative or gubernatorial intent, and departmental mandate. Although the analogy is somewhat simplified, refining policy is like implementing Management by Objectives (MBO). Under MBO, goals and objectives are established and discussed so that each participant knows what is expected. How well the goals and objectives are met determines the effectiveness of the program. The same can be said for a siting policy. Policy becomes the basis (i.e., goals and objectives) upon which the structural siting components function. The primary question asked in designing a siting policy is: What is the process meant to accomplish? Once answered in terms of policy, a process can be designed which guides the siting of major facilities around a set of specific questions.[23]

B. Policy Coordination

The choice among policy options opens and closes different avenues for a siting process. For instance, a position must be taken on growth within a state. Choosing a no-growth policy is often unattainable and/or undesirable. However, a controlled growth policy is a very real choice that suggests development of a strong siting process structured to prevent or withstand pressures for growth in undesirable areas or directions. Conversely, the cultivation of a policy to encourage growth logically reflects a siting process in which only essential state involvement in the siting of facilities occurs. In this case the process may include a cursory review to ensure that any applicable federal or state statutes, rules or regulations are met. Because of these implications, development policy must be coordinated with environmental policy.

While both environmental policy and development policy are closely intertwined, a state has a great deal of flexibility in the design of a siting process which either complements or fails to complement these two policies. While outright conflict between the two policies is conceivable, it is more likely that they do not enhance one another. For example, a controlled growth policy in combination with a weak environmental policy could exist. These two policies would detract from the siting process because they do not promote each other. Lack of congruence may result in inadequate environmental analysis, unnecessary delay due to inherent policy conflicts, and, a general failure of the siting process to function as it was designed, hoped or expected to work.[24]

C. Choosing a Decision Mode

Two relevant modes of impact management exist for siting designs. Based on the state's perspectives on the environment and development, siting involves a choice between these two different regulatory perspectives: the reactive and proactive decision modes. The choice becomes how to manage the impacts of major facility development in the best interest of the state, and its citizens.[25]

Briefly, the reactive mode is a process that identifies and manages adverse impacts to the social, economic, and ecological environments by response. Thus, environmental decision making takes the form of actions aimed at limiting, reducing or alleviating adverse impacts after proposal of a development project.

Conversely, the proactive approach compares different human activities in terms of their impacts on the social, economic, and ecological environments. By ranking the values of these basic human environments according to developed criteria, the impacts of a proposal can be weighed accordingly. In this way, tradeoffs can be assessed in terms of "maximum value and minimum threat."[26]

The major difference between these two modes is the use of planning as a decision making tool. Indeed, the use of planning by whom is also an important consideration. The reactive mode isolates decision making by limiting review to specific impacts of a particular proposal developed and submitted by industry. Decisions have a limited scope which focus review efforts only on impacts and not on state input into the initial decision making process of the proposal.

A proactive approach involves the use of strategic decision making tools. The use of planning implies greater flexibility and earlier involvement of the state and other parties in proposal development. Planning has several different connotations, but, as a decision making tool, it should be used as a means to an end rather than an end in itself. For example, planning must assume the rolé of assessing a proposed facility in terms of need and appropriate size, type and location. Thus, planning involves a determination of how a state will get where it wants to go in light of its siting goals and objectives.[27]

D. Cost and Benefits of Planning

Planning is often considered a comprehensive approach to problem solving. This implies that every event with a possible effect on the decision has been taken into consideration. The fallacy of this approach is explained in terms of the economics of comprehensive land use planning, an area directly related to facility siting, by Raymond J. Suppalla. He states:

> "Comprehensiveness calls for determining the land use pattern that maximizes social welfare. Defined in this manner, comprehensive planning can be

> achieved only if two conditions are met: decision makers thoroughly understand the welfare implications of all land use outputs for all the people involved, and analysts are able to clearly specify the production relationships between land and social outputs, such as clean air, clean water, efficient public utility systems, aesthetic enhancements, etc. Neither of these conditions can be met. . . ."[28]

While other interpretations of comprehensive may also exist, the belief that planning is a comprehensive solution to problem solving is faulty. Rather, and more to the point, the essence of planning is ". . . to recognize opportunities and identify potential threats in the future and work to exploit or combat them by decisions taken in the present."[29] This view implies planning becomes a vehicle to help achieve agreement on growth and its management.

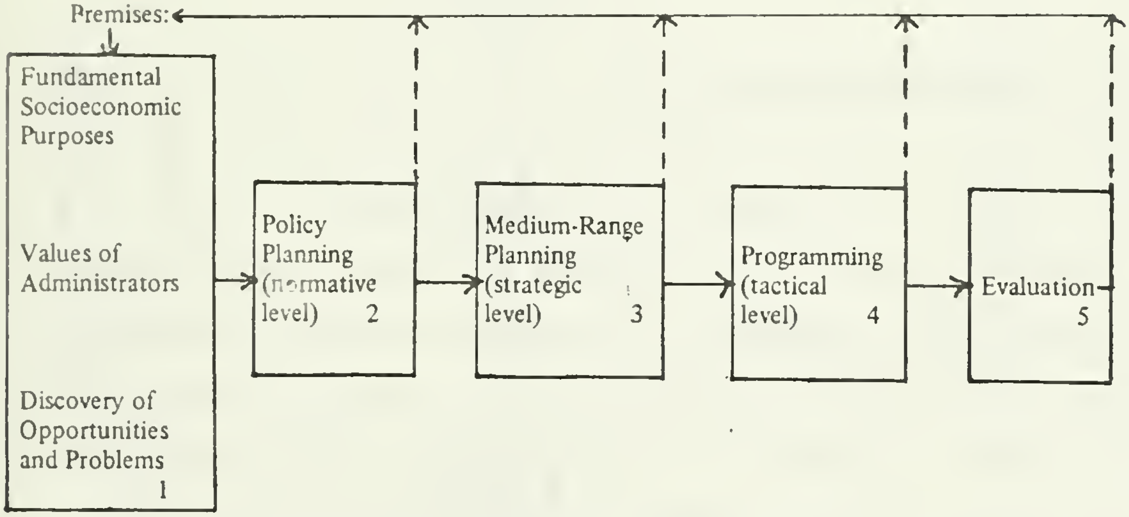
E. Developing a Planning Model

Before a structured siting process can be designed, goals and objectives must be clearly established. A planning framework is essential to understand this part of the planning process. The basic planning model involves five interrelated steps. They include:

1. The identification of the problem or problems to be solved and the opportunities to be seized upon.
2. The design of alternative solutions or courses of actions (i.e., policies, plans, and programs) to solve the problems or seize upon the opportunities, and a forecast of the consequences and effectiveness of each alternative.
3. The comparison and identification of different alternatives with each other and with the forecasted consequences of unplanned development, and choosing the alternative whose probable consequences would be preferable.

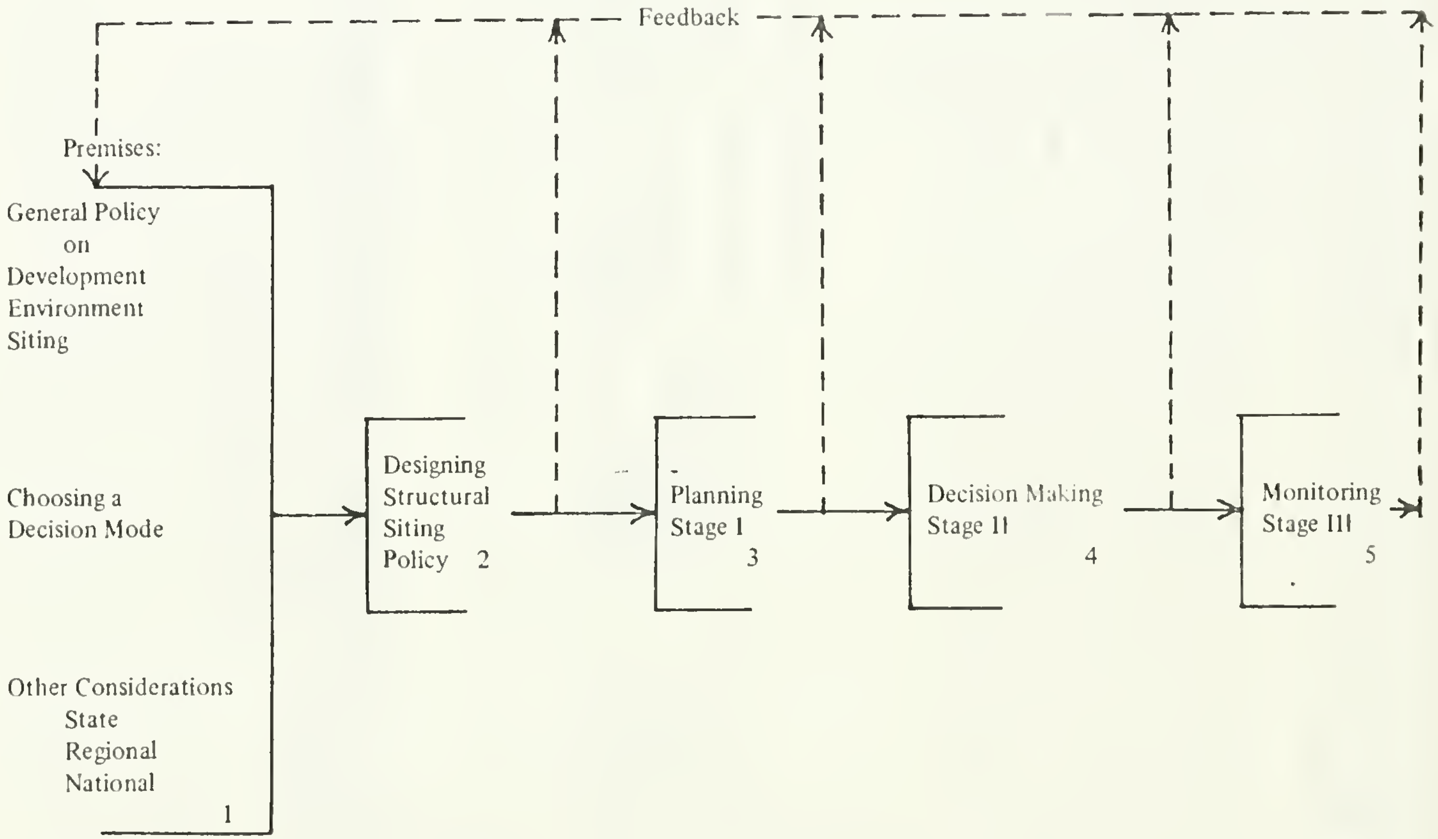
4. The development of a plan of action for implementing the alternative selected.
5. The maintenance of the plan on a current basis through feedback and review of information.[30]

While these steps are numbered consecutively, they tend to overlap and feed back into each other, resembling a cyclical process. Thus, a better illustration of the process is a flow model which represents the dynamic and iterative nature of the planning process (Figure 1).[31] Thus, the framework for siting can be expressed as a series of feedback and feedforward loops similar to the basic planning model (Figure 2).[32]


Premises:
Fundamental Socioeconomic Purposes
Values of Administrators
Discovery of Opportunities and Problems
1
Policy Planning (normative level)
2
Medium-Range Planning (strategic level)
3
Programming (tactical level)
4
Evaluation
5

Source: This is a composite model, embodying the theoretical formulations of Steiner (1969), Jantsch (1969), Ozbekan (1965), Starling (1977) as taken from Grover Starling, *Managing the Public Sector,* Dorsey Press, Illinois 1977, p. 129.

Figure 1. Basic Planning Model



Source: Based on the "Basic Planning Model" developed by Starling, and others, as well as the author's work on a complete proactive siting process.

Figure 2. Siting Flow Model

Siting Approaches

Power granted to a state or other public authority for assessing siting questions can be discussed in terms of what is done and by whom. Systematic planning has been discussed in much of the siting literature, but the requirement for a certain amount of flexibility has often been ignored in favor of a universal approach which relies heavily on a comprehensive, centralized decision process. According to the literature, a one stop mechanism should analyze all relevant siting questions.[33] However, promoting a consolidated (one stop) comprehensive process as the only solution to siting questions may obscure critical economic and political issues. It may be the case that states cannot afford to establish such a process or may not want to give a single agency large grants of power. Thus, the comprehensive consolidated siting approach may be unattainable.

An analysis of traditional approaches to siting suggests that certain factors affect a process's workability. Siting can be broken down into dimensions of completeness, centralization, and institutional orientations. Both completeness and centralization involve a continuum along which different procedures and powers can be ranked. Institutional orientations imply inherent agency bias in the selection of a decision body.

When the former two are placed in a matrix different approaches can be identified according to the amount of completeness or centralization. However, due to economic and political factors many of these choices are irrelevant. The remaining choices identify various reactive and proactive decision modes. Therefore, a more realistic approach to siting is a process which includes all essential analysis stages; i.e., is complete, and yet allows a state to determine how centralized the process should be depending upon relevant economic and political factors. By process of elimination, the matrix can be reduced to potential choices for a siting framework by imposing siting goals and objectives.

A. Dimensions of Siting

The completeness of a facility siting process can be evaluated in terms of the key questions that are analyzed. Although the elements of the model approach are fully presented and discussed in Chapter 3, several key factors can be identified here: the questions of need, alternatives, extent of impact analysis for the social, economic and ecological environments, and a feedback or monitoring system to ensure compliance with certification. A reactive approach may focus on these questions, and in effect provide for a complete review, but the nature of the process places the siting authority in a position that does not directly address these questions. This is true since the process usually starts after an application has been accepted. Conversely, the proactive siting mode allows agencies to interpret and do preliminary analysis on the key questions of need, alternatives, and impacts before a specific facility is proposed. Actual certification procedures do not begin until an application is received and accepted, but this approach provides advance opportunities to assess key questions without being limited to review of a given proposal. This greater flexibility differentiates the complete reactive from the complete proactive siting approach.

Centralization can be viewed as a continuum along which we can array different configurations of agencies and authorities. The most centralized siting method would be a one stop agency with decision making and analysis power or responsibility over all aspects of a proposal. However, the usefulness, or workability of such an agency can be questioned. Not all states have political or economic climates favorable enough to allow this type of agency to function properly. At the opposite end of the continuum is a myriad of uncoordinated and overlapping agencies. This type of decision making does not specify any final siting authority at all. It can be classified as a multiple stop process, in which resulting decisions are haphazard. This process often grants veto power to a number of different agencies, creating uncertainty and unnecessary delays. The centralization problem becomes that of choosing among options that lie between these two extremes.

Flexibility implies that the most desirable siting process is one that permits a number of agencies with special competence to contribute fully to the final decision, and yet provides for coordination and control by a single agency. A complete review of siting questions is provided, as well as centralized responsibility for the final decision.[34] Unfortunately, this type of authority does not fit well under either the 'one stop' or 'multiple stop' siting authority classifications, since it combines useful characteristics of both methods. This choice of decision processes has several implications for the type of agency given final certification authority.

Siting authorities have different orientations which tend to reflect or reduce a specific institutional bias. For example, an economically oriented siting authority tends to emphasize those factors over social and ecological considerations. Similarly, the environmental oriented authority tends to emphasize the ecological and possibly social impact factors more than economic factors. Conversely, a siting authority with a mixed bag orientation is an attempt to balance the three basic environments; economic, ecological, and social during analysis.[35]

B. Integrating the Dimensions of Completeness and Centralization

Each of the assumptions about completeness and centralization can be interpreted to determine whether the process should ultimately rely on a reactive or proactive decision mode.[36] For example, the choice of a strong environmental policy suggests that a broad range of impacts be studied. Therefore, it follows that the optimal decision mode is one which allows the widest, most complete range of impact assessment; i.e., the proactive approach. A reactive approach, on the other hand, is best suited for a process that seeks to merely ensure applicable standards.[37] Similarly, the amount of centralization desired rests with the type of agency chosen. For example, an environmental bias dictates the choice of an environmental agency as the final decision maker. Economic and social impacts analysis would be handled by agencies, according to expertise. They would supply the decision making agency with their assessments of a proposed facility. Similarly, inferences can be made about the choice of other agency orientations. Indeed, the strongest case for centralization may rest with a balanced siting orientation; i.e., the mixed bag approach. This implies a decision body that did all relevant analysis on its own would require more centralization than the other two approaches in order to accomplish complete responsibility.[38]

The factors of completeness and centralization suggest that the choices from the matrix are limited to those which lie in the middle of the different continuums. This assumption is strengthened when the effects of institutional bias are accounted for.

Thus in many cases political and economic factors dictate that siting be approached pluralistically. The pluralist approach involves the reliance upon expert agencies and various statutes to address siting questions.

A pluralist approach to siting has both costs and benefits. Benefit occurs from the flexibility the system allows. For example, an appropriate set of criterion for one major facility development may be entirely inappropriate when applied to another different facility. Thus, the system flexes to meet the needs of different criteria depending on the type of development. On the other hand, there are also problems such as confusion and overlapping jurisdictions.

The key to flexibility is a coordination mechanism which seeks to maximize the benefits and minimize the costs of the pluralist siting approach. The siting model includes a coordinated process which emphasizes both planning and flexibility. Planning helps answer the key question of need, alternatives, impacts and monitoring. Flexibility enables necessary input from expert agencies. Coordination is achieved through a siting act which serves as the statutory framework for decision making. The following criteria illustrate the goals and objectives of the model process.

Criteria for Assessing a Siting Process

Based on a discussion of the reactive and proactive decision modes and the implications of the dimensions of completeness and centralization, several criteria can be developed to evaluate a general siting process. The criteria rely on comments of policy makers and other government officials. They measure effectiveness in terms of what a siting process should accomplish.[39] The criteria include:

1. A decision framework capable of assessing the key questions of (a) need, (b) alternatives, (c) short and long term impacts of development, and (d) monitoring.
2. Joint participation and interaction between all parties (public and private) in terms of need determination, forecasting and long range planning, et cetera.
3. The full consideration and weighting of economic, social and ecological impacts according to specific criteria.
4. Restrictiveness of the process in terms of time, money and other resources used in the review balanced against information requirements necessary to address key questions (No. 1, above).
5. Flexibility in assessing different types of facilities, alternatives and their impacts through established review procedures.

The following chapter utilizes these criteria 'in the development of a proactive siting model.

Chapter 3

DEVELOPMENT OF A 'MODEL' SITING PROCESS

The search for answers to facility siting questions often results in the juxtaposition of conflicting viewpoints. In fact, the facility siting dilemma does not lend itself to absolutes. Just as identifying a singularly wrong siting approach is difficult, the search for a singularly correct legislative answer is also quite elusive. The matter is one of legislative balance which utilizes both institutional and policy biases throughout the design of a siting process.[1] These conflicts will not be easily resolved; however, efforts can be taken to manage them more effectively.[2] Effective management identifies conflicts and works to optimize decisions to reflect the maximum possible social benefit. Guided by governmental policy and institutional design, regulation through the informatory process promotes desired behavior through a system of environmental rewards and punishes undesirable behavior through a system of environmental sanctions.[3]

A Complete Proactive Siting Approach

The key to facility siting through an informatory process is the involvement and participation of all interested parties. Principal parties include the state and public and private interest groups. The benefits of public involvement in the complete proactive siting process are derived by providing various points of access. In this manner participation by all principal parties can be achieved throughout the siting process.

A complete proactive siting process consists of three phases, each having a different function. These phases are integrated and coordinated into a systematic information generation and gathering process. Briefly, the siting process can be outlined as follows[4]:

Phase I: Planning

- forecasting
- consideration of alternatives
- presite review
- early disclosure
- review of need

Phase II: Certification

- formal application
- separate site and facility review and certification
- judicial review

Phase III: Monitoring

- monitoring system
- enforcement system

Phase I deals with the key questions of need and alternatives. Phase II involves the formal decision to accept or reject a proposal. During this phase, the adverse social, economic and ecological impacts of a proposal are formally analyzed. Standards for certification are continually enforced in Phase III. This phase involves the monitoring of facility construction and facility operations. Involvement by the principal parties is a necessity during each of these phases.

A. Phase I: Planning

A complete planned siting process functions as part of a statewide planning system that regulates natural resource development and general land usage.[5] Facility siting planning utilizes both past trends and future estimates as the basis for present decisions. This approach provides the best possible information to help answer questions concerning need, impacts, alternatives, by utilizing both past trends and future estimates for present decisions. Information generated can be used throughout the rest of the siting process.[6] Five elements comprise this phase: forecasting; consideration of alternatives; early disclosure; review of need; and presite review and their components.

1. Forecasting must incorporate past information and future estimates into a body of knowledge to predict ultimate trends and to help answer questions about the need and alternatives for a proposed facility. A state must have techniques for gathering, measuring, predicting and analyzing forecast information. This involves the development of a common data base between state and industry.[7] Industrial forecasts and plans are important, but both state and industry should develop a common data base which utilizes other information sources as well.[8] The agreed upon data base must have the appropriate perspective, a uniform system of measurement, a precise definition of terms, and it must be rapidly accessible so that information can be easily transmitted to all users. Forecasting identifies trends in order to analyze need, but it does not determine the appropriate type of facility or timelines of a proposal. Certification of these factors occurs in later siting actions.

Like all siting elements, the strength of forecasting depends upon the strength of its components. Certain key components, i.e., provisions which contribute useful information, can be identified.[9] These components include the: length, use, flexibility and information requirements of the forecast. To help reduce uncertainty and to provide a greater range of choice in the management of natural resources, forecasts must predict both short and long run futures. Thus, in many respects, the length of a forecast reflects its use. This element should "serve to analyze and disseminate as much information as possible."[10] It must be exhaustive and definitive, allowing specific developments to be reviewed later in accordance with evaluative criteria. Further, it is beneficial to have a variety of forecasts with different scenarios. This provides flexibility.

2. Alternatives to a proposed facility should not be arbitrarily limited. For example, options such as the no action and other alternative technologies for achieving or meeting projected shortfalls between energy supply' and demands, must be considered.[11] This helps in answering the questions of the appropriate size, type and location for a facility. The consideration of alternatives can be evaluated on two bases: the range of practical and viable alternatives considered, and the extent of study on alternative technologies and their associated impacts.

The range of practical and viable alternatives should not be limited to a choice between the proposed facility or nothing at all.[12] Considered alternatives would be options to modify a proposed facility or adopt a new type of technology. Two factors affect the consideration of alternatives; the types of technology analyzed and identification of their potential impacts. A wider range of choices for meeting a determined need is provided through alternative technology studies.[13] The analysis should focus on identifying alternatives consistent with stated goals and objectives and their potential impacts.

3. The purpose of presite review is to reduce the number of site related issues by narrowing the scope of review to only site related questions. The identification of site issues may be accomplished in two ways: (1) the identification of potential site areas, i.e., site banking or inventorying, and (2) the identification of general areas where certain facilities may not be built, i.e., avoidance areas. The distinction between orientations of these methods can be put in these simple terms, respectively: "Yes, you are authorized to put a facility here" and conversely "No, you don't put a facility here."[14] Presite review is a continuous process that involves the periodic update and review of potential sites and selection criteria. Therefore, the strength of this element depends upon the method chosen and its time limitations.

Site banking, and site inventorying rely upon direct state involvement in site identification. Site banking consists of the outright purchase of a site by the state. When a facility is proposed, the state offers to sell or lease an appropriate site from its holdings. Similarly, a site inventory identifies a list of possible sites from which industry chooses according to specific facility types and sizes. In a site inventory system the state does not own, but acknowledges the potential of a site. The inventory may be developed by the state or the industry, but in either case, it is up to the industry to actually acquire the site. Both of these methods require review and hearing before a site is identified and/or acquired.[15] Further, once designated as a potential site these methods effectively preclude the vetoing of the selected site at a later time.[16]

A less aggressive approach to site identification is the determination of unacceptable areas or locations for major facilities. This approach provides more flexibility by allowing; (1) industry to select a site of its own choosing and yet the site is (2) subject to a set of approval criteria imposed by the state. While not actually selecting a site, the state guides industry to generally acceptable locations through avoidance criteria which impose site limitations, restrictions or conditions. The actual certification or approval of a specific site occurs later, and the state retains the right to reject a chosen site based on adverse impacts identified through environmental studies.[17]

4. An essential element of the planning process is the ability of all parties to participate in the development of an appropriate facility proposal. The purpose of early disclosure is twofold; first, it provides state agencies and interested groups with advance notice of an industry's intention; and secondly, it provides a forum in which to identify relevant questions for analysis and to clarify state and industry positions. The strength of this element can be measured by the provision for advance notice and the use of a prehearing conference.

Advance notice is industry's notification of the state and public of its intentions. It occurs before the filing of a formal application. An orderly framework for raising issues reduces the chance of reviewing them at inappropriate times by allowing the state and interested publics to formulate objections or concerns before industry is irreversibly committed to a proposal.[18]

There should be no reason to re-examine issues of generic concern, whether they are site specific or facility specific, unless new data or factors not previously dealt with or resolved can be identified.[19] The prehearing conference should be used to: clarify points of view and roles between the industry, the state and the public; identify issues of concern which need to be addressed in further and extended studies; resolve any outright conflicts which may possibly result in procedural delays; clarify the information requested on the application; and address the question of need and alternatives (both facility and site specific).

5. While the question of need is closely related to the element of forecasting, its definition is not simply a technical exercise. The early definition of need is essential to avoid conflicts over what that definition is when applied during later decisions. The involvement of the major parties is particularly important in the development of weighted criteria to assess the different factors of need. This element should be used to certify the need of a proposal before any actions on facility types or locations begins. The definition and evaluation of need is difficult because so many factors are involved. No definitive answers to these complex factors can be presented here.[20]

The elements of Phase I have been presented as a sequence of events which begins with a forecast and terminates in the review of need. However, this enumeration of events fails to reflect the cyclical nature of the planning process. Instead of steps occurring sequentially, it is more realistic to view them as a series of overlapping steps which feed information into each other. For example, the elements of forecasting, consideration of alternatives and presite review all involve continuous actions. Analysis shifts from generalized research to proposal specific review when an application is received.[21] When advance notice is given, the certification of need, through the review of need element, signals this shift in analysis. Data generated in earlier elements is utilized in succeeding phases.[22]

B. Phase II: Certification

The indepth analysis of a specific facility and site is accomplished in the decision phase (Phase II). Both facility and site reviews begin with the formal application. These reviews should rely on planning to supply necessary information to address key questions of need, alternatives, and potential impacts. The decision phase has three essential elements: formal application, separate site and facility certification, and provisions for judicial review.

1. The application process signals the formal notice of intent by industry to build a specific facility at a particular location. The distinction between application and actual certification is that during the application process, only procedures necessary to comply with any formal notification standards are involved. This includes the application for all prerequisite siting permits or certificates. The application itself should be standardized, and yet flexible enough to allow additional information to be requested by different state agencies as needed for review.[23]

An application should provide general as well as specific information about the project.[24] Necessary information should be clarified through statute, rule or regulation and the preapplication conference. However, the avoidance of costly and untimely delays must be provided through application amendment procedures. Amendments to both site and facility applications should not be allowed. Any amendment must be subjected to agency review to determine its significance. If existing research is nullified, additional review periods must be included to accommodate the changes.[25]

2. The objective of a coordinated planning system is the elimination of duplication and overlap by participating agencies. As such, certification must focus on separate

issues of site and facility reviews. Although coordination between the two reviews must exist the separation of site/facility certification reduces the chance of confusion by limiting the introduction of inappropriate issues.[26] For example, the introduction of facility factors into the early site review process adds only complicating issues into the review.

The task of site certification is to ensure a coordinated review of all of the site specific issues. Certification should proceed on the assumptions adopted during the planning phase, including specific reviews of social, economic and ecological impacts, and public hearings on each proposed site.[27] It is important that this process starts before facility certification, since application amendments to ensure that a proposed facility will protect a site's ecological values may be necessary.

One of the principal causes of delay is the duplication of efforts in certification. It is, therefore, important to limit facility certification to issues germane to it, including: the documentation of impacts; the review of technology, and the facility's compatibility with environmental standards. The process is simplified when it must focus only on ensuring compliance with established standards and dealing with unresolved site related issues.[28] In fact, many of the general questions which must be answered in facility certification will have been clarified through the planning phase.[29]

The agency charged with making the final decision should have responsibility for coordinating the separate site and facility certifications. Coordination responsibilities should include: the recognition of different agency timeframes; the development of guidelines relating to work schedules and procedures; and the assurance of advance notice and early involvement of all parties.[30] This responsibility should rest with a single agency which ultimately accepts or rejects a proposal based on cumulative findings of the separate reviews.

3. Appeal or redress procedures must exist to ensure that the rights of affected parties are protected. These procedures should be limited, however, to the resolution of those critical issues that were improperly considered or overlooked during the certification process.[31]

C. Phase III: Monitoring

Monitoring plant construction and operation is essential in order to assure compliance with the environmental standards and criteria under which certification was granted. It should not be used to conditionally certify facilities.[32] Monitoring is complemented by powers to insure compliance.

1. Monitoring should seek to ensure that impacts of the facility do not exceed certified levels or standards throughout facility construction and operation. Monitoring systems should be designed to both measure and evaluate changes in order to mitigate adverse effects according to existing environmental standards.

2. Compliance powers should include the imposition of fines and the revocation of certificates. The power to impose fines should be based on a schedule which penalizes environmentally disruptive behavior, according to the length and severity of violation. The thrust of the compliance system is to make it less expensive to comply than not to comply.

Approaches Taken By Other States

The thrust of a complete proactive siting process is twofold. First, it allows all relevant siting questions to be analyzed before committing the process to the certification of a specific facility and site. Secondly, the questions analyzed are addressed through a planning framework that allows greater flexibility, insuring better decision making.[33] The key to the proper functioning of the planning, certification and monitoring phases depends upon coordination and information generated by the process.

The interdependency of the proactive siting process necessitates the inclusion of all the elements. Without of one or more of them the process falters, resulting in two consequences. Initially, the siting process fails to operate as designed, expected, or hoped. Concurrently, the siting process becomes a reactive decision making tool.[34]

The siting processes in other states are useful in providing a range of options for performing the different elements and components of the model process. These options will be briefly discussed in the following sections.[35]

A. State Planning

Historically, the development of a major facility proposal has been an independent industry action. This trend is often reflected in existing state processes. The following discussion focuses on the elements of planning in terms of what other states have done toward changing this one-sided approach to major facility development.

1. Forecasting. The task of forecasting is to provide useful information about future trends and data. Over half of the existing siting acts fail to provide for a complete forecasting system as defined in this paper. With the exception of a few states, forecast

efforts depend solely on the submission of long range plans by covered industries. While provision of an industry forecast is important, it does not allow the independent assessment of trends.[36] As shown in Table 1, only eight states have a state forecasting capability.[37] Of these states, five rely on a broad energy act to authorize the states with forecasting capabilities. Only the states of California, Florida, and Maryland require state forecasts of energy demands through a siting statute.

2. Presite review. Only eight states have a provision to identify potential sites or avoidance areas (see Table 2). Of these states, four (Florida, Minnesota, New Hampshire and Oregon) chose to inventory potential facility sites; two (California and North Dakota) chose to identify avoidance areas; one (Maryland) chose to bank sites; and finally one (Vermont) chose to identify sites through a general classification of land uses.[38] The remaining states rely upon the applicant to select and identify potential or preferred sites.

3. Consideration of alternatives. Most states do not consider alternatives before an application is submitted. Frequently, the type and size of a proposed facility are given and certification involves the application of existing environmental standards.[39] Only the states of Maryland and California study alternatives before an application is received.[40]

4. Early disclosure. The use of advance notice and a prehearing conference to inform and benefit interested parties in a siting process has not been greatly utilized. In fact, only three states surveyed use both of these components (South Dakota, Vermont and Wisconsin).[41] The use of these components individually occurs more frequently; the

Table 1. State Siting Provisions

State	State Forecast	Industry L.R. Plans	None	Forecast periods (yrs.) 1	2 to 4	5	10	15	20	Stat auth.
Arizona		x					A			SS
Arkansas		x			A					SS
California	x	x				B	B		B	SS
Connecticut		x					A		B	SS
Florida	x	x					B			SS
Iowa		x		A						SS
Kansas			x							SS
Kentucky	x		x							EA
Maryland	x	x					B			SS
Massachusetts		x		A			B			SS
Minnesota	x	x				A	A		A	EA
Montana		x					A			SS
Nevada			x							SS
New Hampshire		x					A	A		SS
New Mexico			x							SS
New York	x	x				A	A	A		EA
North Dakota		x					A			SS
Ohio	x	x					A			EA
Oregon	x	x					A	A		EA
South Carolina		x					A			SS
South Dakota		x					B			SS
Vermont			x							SS
Washington			x							SS
Wisconsin		x					B			SS
Wyoming		x		A			A			SS

Key:
A – annual
B – biennial
SS – siting statute
EA – energy act

Table 2. Other Planning Provisions

	Presite Review			Alternatives Considered		Early Disclosure		
State	Y/n	type	auth.	Facility	Site	Notice of Inten.	PreConference	Review Need Basis
Arizona	No			a	a	No	No	I.F.
Arkansas	No			a	a	No	No	I.F.
California	Yes	3	SS/LU	c	b	Yes	No	S.R.
Connecticut	No			a	a	No	No	I.F.
Florida	Yes	2	SS/LU	a	b	No	No	D
Iowa	Yes	4	LU	a	a	No	Yes	none
Kansas	No			a	a	No	No	none
Kentucky	No			a	a	No	No	D
Maryland	Yes	2	SS	d	b	No	No	I.D.
Massachusetts	No			a	a	Yes	No	S.R.
Minnesota	Yes	1	SS	a	b	No	No	S.R.
Montana	No			a	a	Yes	No	I.F.
Nevada	No			a	a	No	No	none
New Hampshire	Yes	1	SS	a	b	Yes	No	I.F.
New Mexico	No			a	a	No	No	none
New York	No			a	a	No	No	S.R.
North Dakota	Yes	3	SS	a	b	Yes	No	I.F.
Ohio	No			a	a	No	No	S.R.
Oregon	Yes	1	SS	a	b	Yes	No	S.R.
South Carolina	No			a	a	No	No	I.F.
South Dakota	No			a	a	Yes	Yes	I.F.
Vermont	Yes	4	LU	a	b	Yes	Yes	none
Washington	No			a	a	No	Yes	none
Wisconsin	No			a	a	Yes	Yes	I.F.
Wyoming	No			a	a	No	Yes	none

Key:

SS – siting statute
LU – land use statute
1 – site inventory
2 – site banking
3 – area avoidance
4 – other

a – by application
b – by impact
c – alternative technology
d – power plant technology
I.F. – industry forecast
S.R. – state review
D – need by demand

notice of intent is utilized by a total of nine states; while the prehearing conference is ed in a total of five states (see Table 2, Early disclosure).

2. Review of need. In six instances, California, Massachusetts, Minnesota, New York, Ohio and Oregon, need is determined by independent state review.[42] The most utilized tool in the determination of need is the industry forecast (I.F.). On the basis of these documents, ten states rely on industry forecasts as the sole basis for need determination. Two states (Florida and Kentucky) equate need with demand. The remaining states rely on industrial determinations of need (see Table 2).[43]

B. State Decision Making

The key elements in the decision making phase comprise the procedural framework for certification. It includes: the application process, site and facility reviews and judicial review. To a great extent, these elements must rely upon the determination of need, alternatives, and identification of potential impacts associated with a given facility. Utilization of this information differs among various states.[44]

1. Application process. Virtually all of the existing siting processes require that an application be submitted and accepted before the certification process begins. Table 3 categorizes these major permits.[45] Not all existing siting processes have time limitations on the review for completeness of an application. Those states which do and do not have limitations, as well as general timeframes for review, are provided under the 'Comp' heading in Table 3.

Without detailing the application requirements of every state, only general information categories can be summarized. Briefly, the application includes information

Table 3. Decision Phase

	Application Provisions					Certification Provisions		Jud Rev		
State	EC	CN	NP	Comp	Amdmts	Sep Rev	Basis of Sep	Ag.	Ct.	Oth
Arizona	x			3	No	No	None	x	x	
Arkansas		x	x	2	Yes	No	None		x	
California	x	x	x	2	No	Yes	PSR		x	
Connecticut	x			1	No	No	None	x	x	
Florida	x			1	No	Yes	PSR		x	
Iowa		x		2	Yes	Yes	PSR		x	x
Kansas		x		3	No	No	None		x	x
Kentucky	x	x	x	3	No	Yes	A&W	x	x	
Maryland		x		3	No	Yes	PSR		x	
Massachusetts		x		3	Yes	No	None			x
Minnesota	x			3	No	Yes	PSR		x	
Montana	x		x	1	Yes	Yes	A&W	x	x	
Nevada	x		x	3	No	Yes	A&W	x	x	
New Hampshire	x	x		2	No	Yes	PSR	x	x	
New Mexico		x	x	3	No	No	None	x	x	
New York	x			3	Yes	Yes	A&W		x	
North Dakota	x		x	1	Yes	Yes	PSR		x	
Ohio	x			2	Yes	Yes	A&W		x	
Oregon	x			2	No	Yes	PSR		x	
South Carolina	x			2	Yes	Yes	A&W			x
South Dakota		x		2	No	Yes	Imps		x	
Vermont		x	x	1	No	Yes	PSR		x	
Washington	x		x	2	No	No	None		x	
Wisconsin		x	x	2	No	No	None			x
Wyoming	x	x	x	1	No	No	None	x	x	

Key:

EC – certification of environmental compatibility or equivalent
CN – certificate of public convenience and necessity or equivalent
NP – certification does not preempt other permits
Ag. – agency
Ct. – court
Oth – other

1 – up to 30 days
2 – 31-90 days
3 – no period specified
PSR – presite review
A&W – air and water quality
Imps – impacts (social and air)
A – relies on state agencies
B – relies on federal agencies
C – both federal/state agencies

about the proposed facility, proposed site, and alternative facility types or locations. Additional information categories include: existing studies on the social, economic and environmental impacts done by an applicant; methodologies for assessing need and choosing among alternative sites; financial analysis of funding types and their impacts on the proposal; sysrem efficiency standards and improvements; and finally peak load and other demand data.[46]

Approximately one-third of the states allow amendments after the acceptance of an application. These procedures insure that changes are reviewed and analyzed by the siting authority to determine their significance. Major changes require an extension in the review period so that reviewing agencies may accommodate changes affecting the outcome of the proposal (see Table 3).[47]

2. Separate site and facility certification. The summary details of existing siting requirements in terms of coverage, decision body, timeframes for review, et cetera, can be found in Appendix 3, Tables C_1 to C_4. Rather than repeat these provisions, this section deals with the separation of site and facility review. As shown in Table 3 (under 'Certification Provisions'), slightly over half of the existing state siting processes separate these reviews. Separation can be accomplished by one of two ways; through some form of presite review (PSR),[48] or by isolating air and water quality reviews from other ecological issues and social and economic impact assessment. This is not to say that review on all aspects of a project does not occur in other processes. However, in those states marked 'none', there is no specific separation of site and facility reviews. For example, while other agencies may be asked to comment on various issues in their field of expertise, separate coordinated review does not exist. The reliance on support agencies,

i.e., agencies relied upon because of expertise, is very common in siting procedures. In fact, the trend is to ensure other agency participation, not reduce it.[49]

3. Judicial review. Limiting the scope of judicial review encounters many problems. The most significant of which involves the protection of affected parties against unnecessary harm or hardship caused by the siting process. Less than half of the existing siting statutes allow for limitations on judicial review. Several states, however, limit judicial review so that the court may not assume power over any action which has or can be decided by the siting authority. In many cases this results in a hierarchical procedure, with appeals to both the siting authority and the courts (see Table 3).[50]

C. State Monitoring and Compliance

The provisions for monitoring and compliance systems are summarized in Table 4. Of the states with existing siting laws, eleven states chose to monitor facilities after certification.[51] One of those, Florida, requires that monitoring be done by the industry.[52] The others require that the state operate the monitoring program.[53] Seven of the states with monitoring provisions have power to enforce 'civil penalities' or revoke a permit for noncompliance with agreements on certification. The states of California and Maryland do not have specific compliance powers, but use monitoring as a data gathering device for further research.[54] No state surveyed has a statutory provision for assessing fines as a means of compliance.[55]

Table 4. Monitoring Elements

	Monitoring Resp.			Compliance Provisions			
	State	Industry	None	Penalties	Fines	Revocation	Other
Arizona			X				
Arkansas			X				
California	X						X
Connecticut			X				
Florida		X					X
Iowa			X				
Kansas			X				
Kentucky			X				
Maryland	X						X
Massachusetts			X				
Minnesota	X			X		X	
Montana	X			X		X	
Nevada			X				
New Hampshire	X					X	
New Mexico			X				
New York			X				
North Dakota	X			X		X	
Ohio			X	X			
Oregon	X					X	X
South Carolina			X				
South Dakota	X			X		X	
Vermont			X				
Washington	X		X				
Wisconsin			X				
Wyoming	X			X		X	

Chapter 4

ANALYSIS OF STATE SITING PROVISIONS

The government/industry siting relationship is often scrutinized because of the importance of resource development questions.[1] Environmental surveillance mechanisms often take the form of governmental constraints designed to protect the public interest by formulating and implementing environmental standards for air and water quality, land use and aesthetic requirements.[2] These actions have focused on how industry performs and has often avoided the issues of appropriateness in siting review. Indeed most faciliting siting processes are still being performed through after-the-fact planning procedures.[3] That is, the review process begins only after the filing of an application. Such a process places the state at a regulatory disadvantage, without having input into the proposal itself.[4]

The following sections provide an overview of how other states have achieved compliance with the requirements of the model siting approach.[5]

Analysis of Elements and Components

A. Phase I: Planning Provisions

The planning phase consists of five essential elements: forecasting; consideration of alternatives, presite review, early disclosure, and review of need.

1. Forecasting. Only a handful of states require an independent determination of need.[6] Some states do review industry forecasts and plans in assessing need. However, there often is no indepth evaluation by the state and the industry forecast serves as the basis for any need determination. One reason for this lack of state forecasting is the

difficulty in defining need.

Coordinating an independent review of need and yet allowing needed flexibility can be accomplished by the adoption of complementary facility siting and energy statutes.[7] The key to coordination rests with the siting statute, while the provisions of the energy legislation enable independent state evaluation of need.[8] Examples of this mechanism are found in the states of Minnesota, New York, California, and Oregon. In each of these states, dual requirements for state and industry forecasts ensure that a variety of forecast scenarios are provided.[9]

2. Consideration of alternatives. Extensive state involvement in need evaluation identifies realistic alternatives in terms of the appropriate size and type of facility. Two states, California and Maryland, have authority to review facilities before an application is received.[10] In the case of California,[11] the range of alternative technologies considered includes "normal and non-normal",[12] technologies. On the other hand, Maryland has an extensive resource and development program which evaluates only different types of thermal power plants and their associated pollution control technologies.[13]

Most states review alternatives only after the initiation of the certification process.[14] However, a few states, most notably Minnesota and North Dakota, engage in some early analysis of alternative technologies.[15] These states conduct alternative technology and other studies under the auspices of their site review procedures. Thus, without a provision that specifically considers alternatives before submission of an application, only a limited study of alternate technologies is achievable through presite review.[16]

3. Presite review. The purpose of presite review is to narrow the scope of analysis by reducing the number of site related issues.[17] The issues are often related to the type and size of facility considered. For example, the type of alternatives considered 'implies' the extent of impact analysis necessary to ensure proper site identification.[18]

Land use orientations reflect different levels of acceptance for site selection and the choice of methods to implement them.[19] In other words, the choice from among site banking, site inventory, or area avoidance reflect a different land use orientation which allows site identification according to three levels of acceptance. Thus, the final decision can be "acceptable, balanced, or best."[20] Site identification becomes a process of matching site selection methods and land use orientations. For example, site banking assumes a strong state role in site determination but is often motivated by a desire to identify an 'acceptable' location. Similarly, a site inventory is concerned with economic and ecological tradeoffs and oriented toward 'balanced' site decisions. Area Avoidance allows the 'best' decision between site and facility to be made since a final decision comes only after an appropriate facility has been determined.[21]

The only state which actually banks facility sites is Maryland. While the state's procedure for site identification and selection is quite extensive, the general land use orientations are twofold. The first seeks to minimize adverse environmental impacts by a thorough review of power plant technologies. This review categorizes impacts and identifies methods for achieving acceptable levels. Secondly, costs and benefits of alternative proposals are measured against one another to ensure that the desired power plant is of the right size and type. However, site selection is based on a specific size and type of facility. Once approved, a site is purchased by the state. There is no mechanism hich allows the alteration of a site's acceptability. Thus, the banking method locks the tate into acceptance of specific site for a particular size and type of facility.

Inventorying limits the state to the identification of potential sites based on a articular type and size of facility. This limitation is reduced when additional or periodic review of inventoried sites is provided. For example, both Florida and New Hampshire allow review of selected sites after a certain time period.[22] Such a provision allows consideration of changing conditions that may affect a site's potential. However, since certain assumptions about a site's potential have already been made, site inventories tend to select sites based upon a balancing of site factors and external factors.

Area avoidance does not involve problems of delegating a specific site to a particular facility. Rather, the process allows much greater flexibility in achieving a desired siting objective by regulating actual site certification until a facility is proposed but not limiting site identification to a specific proposal. Preferred and alternative locations can be identified and reviewed independently from facility related factors. Both California and North Dakota have provisions for area avoidance.

California combines both a state and industry role in site selection. It is the responsibility of industry to identify and to submit a list of potential sites to the Energy Resources Conservation and Development Commission. The Commission evaluates this list of sites and eliminates undesirable locations. In the event that all locations are deemed undesirable, the Commission must use developed area avoidance criteria to help the applicant identify a potential site.[23]

In North Dakota the state is responsible for identifying and studying potential avoidance areas. This effort results in the publication of an inventory report of exclusion or avoidance areas. The Public Service Commission has a continuing responsibility to establish criteria, to evaluate, to update and to publish the inventory.[24]

Based upon a greater scope of regulated activities, a land use statute allows more flexibility in overall resource planning.[25] The adoption of such legislation precludes the use of other site selection methods by classifying categories of land usages. The use of a land use statute in combination with a facility siting statute provides an illustration of flexibility. Florida has integrated this concept into its siting process. The inventory of potential sites is based upon a plan which incorporates both state and local land use considerations. The process is utilized to predict alternative site locations from two to five years in advance of selection. In addition, it provides for local, state and some federal commentaries on a proposed site. Once a site is identified, alternatives are not considered unless the initial or preferred site is termed environmentally unsuitable or its suitability is deemed too expensive.[26]

4. Early disclosure. State and public involvement depends upon anticipatory notification of opportunities for participation. Early disclosure is dependent upon established time periods for giving notice and holding conferences before a formal application is filed. Advance notice must allow adequate time for interested parties to preliminarily assess and formulate input concerning key questions. The preapplication conference can be used to identify or to decide potential conflicts, while providing opportunity to expand and to clarify future information requirements.

Variation in the usage of the early disclosure element does not detract from its effectiveness if information requirements are met. For example, provisions for either advance notice[27] or the preapplication conference[28] occur more frequently than do both.[29] Benefit can also be received through an extended procedure revolving around the advance notice or conference.[30]

Provisions may focus on two different orientations; as an early notification procedure, or as the initial step in an expanded preapplication conference. But, whether used singularly or in combination this element is most useful if: (1) state and public officials become involved in a proposal before a formal facility is proposed, and (2) that information on the following is generated: (a) the roles and viewpoints of state, industry and public; (b) on issues of concern for extended and further study; (c) the resolution of potential conflicts that may possibly result in procedural delay; (d) application requirements and additional data needs; and (e) questions of need, alternatives (both facility and site) and impacts.

5. Review of need. An independent review of need by the state, relying on its own and industry forecasts is essential in order to correctly assess key questions of the necessity and appropriateness of a facility. Need determination is often limited to a set of preselected options promoted by an applicant. A total of six states have the capability to independently assess and review need. Most of these states depend on an energy act.[31] Two benefits of this approach are illustrated by Minnesota.

The Minnesota siting process delegates forecasting and need determination responsibility to the Minnesota Energy Agency. The Agency was established to encourage the thrifty use of energy, maximize energy efficient systems, conserve energy resources, and assure environmental protection consistent with an adequate and reliable energy supply.[32] Among its various duties, the agency is responsible for the issuance of a certificate of need and serves as a central respository for energy data.[33] The Agency relies upon its own as well as annual utility plans and forecasts to evaluate need. It publishes this information in a comprehensive, biennial report on energy trends, supply, demand, conservation and other factors.[34]

To effectively contribute to the feedback/feedforward process of the proactive approach, the review of need is dependent upon several factors. They include: an independent assessment of need by the state; a variety of scenarios to assess cost and short run futures; the analysis of state and industry forecasts; and finally a mechanism which generates information about both need and alternatives.[35]

B. Phase II

Actual procedures for certification of major facilities have received the most attention in existing siting statutes. To analyze these procedures, application requirements, certification provisions, and limits on judicial review must be evaluated.

1. Application requirements. The nature of administrative decision making implies that regulatory agencies receive applicant information which serves as the partial basis for evaluation. All existing siting processes require that some formal notice for a site or facility related permit be given. The amount and type of information required by each state differs. For example, those states which rely on industry forecasts as the basis of need determination often require more information from the applicant than states with independent need assessment capabilities. However, requested information usually falls into three general categories: information on the preferred facility, site and any considered alternatives; industrial studies on the social, economic and ecological impacts of

a specific facility at a particular location; and financial impacts of funding, type of construction, rate bases, consumer cost, et cetera.[36] Amending a proposal to reflect environmental or other considerations not previously considered reduces unnecessary delay. However, this process must be subject to agency review to determine the extent of the change and its effect on the outcome of a proposal. Extended or addition review periods should exist to accommodate significant changes. The amendment provision is prevalent in only seven states.[37] Most states limit amendments to the same procedures followed during the original application.[38]

2. Certification provisions. Approval or denial of an application to construct a major facility is the most universal mechanism in regulating how industry provides service.[39] The most common vehicle for this analysis is the environmental impact statement (EIS).[40] Once an issue of debate between industry and state, major facility siting now involves public groups through provisions for public hearings and comments on proposed actions through EIS documents (see Table 1).

a. Isolating issues associated with a particular facility and a specific site into two separate but coordinated review processes tends to reduce the chance of overlap and duplication of efforts. Separation can be accomplished directly (through site selection) or indirectly (for example, by separating air and water quality issues from others).

The inability to effectively reduce duplication or overlap often results from the incorrect separation of these reviews. It is better to identify potential sites and problem areas before narrowing review to a particular type and size of facility. The most effective way to do this is through a presite selection process.

Table 1. Decision and Support Agencies

	Decision body(ies)				Support agency types					Fed	No
State	Econ	Envir	MB	Others	NR	PSC	F&W	H	Others	Eis	Stops
Arizona			X		X	X	X	X	X	X	1
Arkansas	X	X					X	X	X		2
California		X				X		X	X		1
Connecticut			X		X	X			X		1
Florida		X				X			X		1
Iowa	X				X	X	X	X	X		1
Kansas	X							X	X		1
Kentucky	X	X							X	X	2
Maryland		X				X		X	X		1
Massachusetts			X		X	X	X	X	X		1
Minnesota		X			X			X	X		1
Montana		X				X	X	X	X		1
Nevada	X				X						1
New Hampshire			X		X	X	X	X	X		1
New Mexico	X				X		X	X	X		1
New York	X				X				X		1
North Dakota	X				X			X	X		1
Ohio			X		X			X	X		1
Oregon			X		X	X	X	X	X		1
South Carolina	X						X	X	X		1
South Dakota	X				X		X	X	X		1
Vermont	X				X			X	X		1
Washington			X	G/L	X	X	X	X	X		2
Wisconsin	X	X			X	X	X	X	X		2
Wyoming			X		X	X	X	X	X		1

Key:

Econ – economic orientation
Envir – environmental orientation
MB – mixed bag orientation
Others – other types
G – Governor
L – Legislature

Departments of:
NR – natural resource or equivalent
PSC – public service commission or equiv
F&W – fish and wildlife or equivalent
H – health or equivalent
Others – not mentioned

The separation of site and facility reviews need not be at the expense of flexibility. Indeed, the use of support agencies to separately evaluate impacts can enhance the process. In fact, all states surveyed rely to some extent on other agency expertise during certification. Table 1 summarizes the decision and support agencies utilized in existing siting processes. Regardless of the orientation, support agencies provide valuable flexibility.[41]

b. Use of weighted criteria benefits both short and long run decision making. When an agency is relied upon because of expertise, any recommendation or decision by that agency should be technically binding on the siting authority. However, the site authority must also be able to assess cumulative impacts of a proposal as well as short run impacts, thus overriding an agency recommendation when criteria dictate so. Although nearly every statute establishes a set of evaluation criteria, they are very general. If any weighting occurs it is usually subjective.[42]

The beneficial amount of discretion granted to a siting authority is exemplified by Wyoming's Industrial Information and Development Act.[43] After extensive evaluation by other agencies, a final decision is made by the Council according to seven criteria, If all seven criteria are met, the council is 'obligated' to certify the facility. But on the occasion that any of three mandatory criteria are not met, a proposal is rejected. However, if only the three mandatory criteria are satisfied, the Council has the discretion to grant or deny certification. Thus, the siting act provides the Council with a discretionary area where a proposal may be judged beneficial and approved, or detrimental and rejected according to strict criteria.[44]

While flexibility is beneficial the associated problems of coordination must be dealt with.[45] These problems can be overcome by empowering a single siting authority with responsibility for coordinating support agencies activities, evaluating cumulative impacts and ensuring that the decision meets developed criteria which weigh the relative importance of different factors.[46]

3. Judicial review. Limitations on judicial review are inappropriate in cases where a faulty decision has been made. This does not include the right of an aggrieved party to delay a correct but unfavorable decision. Judicial review should exist to ensure that statutory procedures are followed, and that proper protection is accorded to all parties against arbitrary capricious or malicious decisions. Limiting the scope of judicial review involves complex systems of administrative rules, regulations and other legal factors. Thus, justification for limiting judicial review may face numerous legal problems that cannot be dealt with in a paper of this nature.

C. Phase III

The monitoring phase regulates a facility to ensure continuous compliance with the conditions of certification. This does not imply that monitoring be used as a condition for certification. It is to ensure continuing compliance with environmental standards that were the basis of certification. The monitoring phase consists of two elements: a monitoring system and a compliance system.

1. Monitoring systems. A monitoring system should be capable of measuring changes in key ecological variables including air and water quality and other factors. In all

cases, the system must measure both predicted and unpredicted changes and their magnitudes.

Monitoring responsibility[47] is provided by siting laws in seven states to gather data on methods for improving technological efficiency and pollution control technologies. Some systems do not attempt to enforce compliance.[48] On the other hand, siting acts in Florida, New Hampshire, Oregon and Wyoming monitor to ensure that conditions of certification are met.[49] The strongest of these provisions is found in Wyoming's Industrial Development Information Act.[50] Monitoring is a continuing responsibility of the Industrial Siting Council. It utilizes other state agency resources in assuring continued compliance of certified facilities. This duty includes discovering and preventing noncompliance with various permits, and ensuring compliance with laws, regulations or conditions pertaining to air, water or land quality and solid waste management.[51]

2. Compliance system. Designing different provisions to reward desired behavior helps promote desired siting goals. Most states with compliance powers rely on a system of civil penalties and permit revocation or suspension. While important, these mechanisms do not actually force compliance. Ensuring environmental compliance depends on a three pronged approach that allows civil penalties for violations of procedural requirements, a graduated system of fines for noncompliance with environmental standards, and finally revocation or suspension power for cases of gross noncompliance.

Punishments for misrepresentation, falsification or other failures to comply with the requirements of the law are termed civil penalties. For example, a utility which begins construction without securing a required permit would be in violation and subject to a fine. Siting laws in six states impose civil penalties for these types of misdemeanors.[52]

A graduated system of fines should be established to ensure compliance with established environmental standards. This provision is not concerned with compliance with siting act procedures. The objective is to maintain compliance and to prevent additional degradation from existing standards. None of the surveyed states have such a provision.

Once a facility is operating it is extremely difficult to shut it down. It is more effective to impose a system of fines which makes noncompliance very costly. However, it is also necessary to empower the siting authority with the ability to revoke a permit for gross noncompliance. A total of seven states have provisions for revocation that subject such action to a public process to evaluate any implications of facility shut down.[53]

Factors Affecting the Choice of Elements

Analysis of the procedural requirements of other states is important, but does not address two important factors. These include how the process is funded and what facilities are covered. Both factors have implications for the design of a complete planning process.

A. Funding

Securing sufficient funds to accomplish the tasks throughout the siting process helps in answering key questions. Funding provisions should provide monies to do necessary planning, and cover the costs of certification and monitoring. Several mechanisms for funding can be utilized, and each has a different implication for use in a siting process.[54] Slightly over half (15) of the survey states require an application or filing fee.[55] According to the size of the fee assessed, the siting authority usually has money to fund its certification activities and related expenses. However, the process tends to be reactive, since funds are available only when an application is pending.

Financing continuous siting operations, such as forecasting, is better accomplished through an annual assessment or tax on energy output. Five states have provisions which establish a siting fund from which monies are drawn to pay for various activities including both planning and certification procedures.[56]

A few states have no specific funding provision stated in their siting acts. Miscellaneous funding includes: agency out of pocket costs, or the reliance upon the applicant to pay the costs associated with certification. Absent any other funding provision, it can be assumed that the responsible agency pays certification expenses from its own budget.[57] On the other hand, applicant financing of the full or partial cost of certification is required by two states.[58]

The funding method utilized is often dependent upon the extent of the siting process. For example, a process which includes many planning elements would require a method of continual financing. Such is the case in the state of Maryland where an Environmental Research Fund has been developed. Money from a surcharge on each kilowatt hour of generated electricity is placed in the fund for the purpose of carrying out environmental research, site selection, and facility certification activities.[59]

A combination of funding methods may provide financing for both continuous and occasional certification activities. This approach is found in four states.[60] Two noteworthy examples, California and Minnesota, assess each covered utility a surcharge based on a millage of each kilowatt hour of electricity sold.

In California, quarterly payments are made to the Energy Commission which utilizes the money in its research and development efforts. When a notice of intent is filed, it is accompanied by an additional fee of one cent ($0.01) per kilowatt of proposed generation capacity. The fee must not be less than a minimum of one thousand dollars and not to exceed a maximum of twenty-five thousand dollars. It is used to defray the costs of assessing the proposed project against accepted long range plans.[61]

Minnesota has separate fees for both site and route applications and a general assessment. Site fees are determined according to the cost of the facility but are not to exceed a maximum amount.[62] Transmission line fees are calculated from a base fee plus additional charges per mile of the longest proposed route.[63] Both fees are paid in at least four payments to the Environmental Quality Board to fund its project specific analysis. In addition, the board finances any further base line studies, environmental assessments, the development of criteria, site inventory, preparation, monitoring programs, and all other work through an annual assessment against all utilities.[64]

A siting process benefits from different types of financing. In other words, continuous actions such as forecasting, site selection and alternative technology studies should be funded through an assessment or tax, while actual facility and site certification can be financed by an application fee. In many respects the sources of funding can be enlarged through a broader range of facility coverage.[65] However, regardless of its use, the source of funding should provide enough money to allow the complete assessment of all siting elements.

B. Covered Facilities

The hesitation in expanding coverage of facility siting acts is related to an overwhelming desire to not regulate industrial activities because of complex issues, including land use questions, and problems with local controls. The complexity of the issue is compounded when trying to define a 'covered facility'.[66]

The planning approach to siting is flexible enough to adjust to a variety of different types of facilities. If all the elements of the deductive siting process are utilized, there are few obstacles that cannot be accommodated by adjusting for evaluative criteria, and funding. Thus, the goals of an effective siting process are enhanced by the ability to deal with a broader range of facilities and their impacts.

Unanswered Questions

Future research on siting questions must focus on certain types of questions. This research would tend to focus on implementation of the various siting elements. In many cases questions have been raised and left unanswered. They are dealt with in the following sections.

A. Forecasting

What is the best method of forecasting? While it is possible to identify important components and coordination mechanisms, a statement about the best method of predicting future outcomes cannot be presented in this paper. Forecasting involves the use of a common data base, long range planning by both state and industry and a variety of scenarios to facilitate long as well as short term decision making. Depending on the flexibility and centralization desired, coordination of the forecasting responsibility can be accomplished in a number of ways.[67] The tradeoff between these approaches is the amount of independent evaluation which occurs.[68] These implications must be considered, but specific forecast techniques are left for further analysis.

B. Public Participation

What are the most beneficial types of public participation? Throughout the paper various points for public participation have been identified. In some instances, suggestions on how comment and participation may be used were also given. However, the methods of inducing this public involvement remain for analysis. Public participation is essential to the acceptance of a siting process and for social decision making. Although assessing public sentiment is difficult, problems can be reduced by utilizing public participation to develop weighted criteria, to assess need, and to resolve conflicts. The challenge to future research is to find equitable ways of channeling this input through the appropriate decision making tools.

C. Criteria

What are the essential parameters for evaluating alternative facilities or their impacts, and general questions of need and appropriateness? The development of siting criteria is an area that receives a great deal of lip service but very little action. Almost every siting act establishes general categories of criteria that must be met before certification. Unfortunately, this approach becomes quite subjective.

A siting authority must retain some discretion, however it is important to develop weighted criteria to reduce subjectivity. Defining need and using that definition to limit alternatives is the key to effective decision making. However, the definition of need is difficult. Future research must focus on crucial parameters that can be used in need evaluation. For example, need is currently assessed by rate of use, other measures of demand should be developed.

Future research on siting questions must also determine the values of environmental tradeoffs and industrial gains by promoting a system of weighted criteria which assess them in terms of minimum harm and maximum value. The definition of these terms is the key to effective criteria weighting.[69] This weighting must include both mandatory and discretionary criteria.

D. Judicial Review

What, if any, limitations should exist on judicial review? A complex legal problem, judicial review is not simply limited to appeal procedures. It may involve other aspects of certification including parties to the proceeding, provision for counsel, hearing examiners and other procedural aspects.[70]

In this respect, future studies on limiting judicial review should emphasize minimization of procedural delays by establishing hearing schedules, procedures, et cetera.

E. Monitoring

What is the most technically useful monitoring system? Like many of the other elements, monitoring consists of necessary do's and don't's. For example, monitoring should ensure compliance with accepted environmental standards, but should not be a condition for certification. To be effective, a monitoring system must be able to analyze changes on the ecosystem, in terms of not only air and water quality, but effects of effluents on downwind (or downstream) plant, insect and animal life. Additionally, the system should provide feedback information for use in evaluating pollution control technologies, et cetera. Further research on monitoring should also focus on the establishment of an effluent fine system. The objective of such a system would be to penalize noncompliance by incremented fines for increases in the occurrence or severity of illegal discharges. How to accomplish this is a subject for future research.

Comments

The discussion so far has relied upon identifying important and necessary elements, providing a range of options, and relying on further research for specific implementation techniques. Now the emphasis shifts to applying the conclusions of previous chapters to the improvement of Montana's siting process through effective use of institutional design and model process considerations identified earlier.,

Chapter 5

RECOMMENDATIONS FOR IMPROVING MONTANA'S SITING PROCESS

Montana's siting framework evolved over a number of years. The haphazard and complex system of resource regulation was replaced by a simple functional structure during Executive Reorganization in 1970. These actions were later ratified by the state constitution which took effect in 1972. The constitution also established a strong set of environmental rights and duties for the state's citizens and governmental officials. While constitutional adoption occurred after its passage, the Montana Environmental Policy Act (MEPA) of 1971 established a legislative concern that formed the basis of other environmental legislation.[1] Problems arise when established procedures dictate that the process results in outcomes other than those it was designed to enhance. The following sections analyze existing siting procedures and recommend changes.

Analysis and Implication of Amendments

The Siting Act was intended to provide a vehicle for state and public comments on proposed major facilities.[2] It has placed these decisions into a public forum, but the process has not functioned as was intended by its drafters to address many of the important questions essential to siting and has operated as an inefficient decision making tool. Dissatisfaction with the process has led to amendments during every legislative session since its inception in 1973. Accordingly, amendments during the 46th Legislative Session in 1979 made changes to correct what were termed unnecessary delays uncovered during the Colstrip Case.[3] A brief outline of the amended process and requirements may be found in Appendix 4.

Many of the underlying problems of the siting process were not addressed in the amendments. Whether or not the Colstrip Case was a true test of the Siting Act is irrelevant. Identified weaknesses have prompted misguided recommendations to the legislature that have generally failed to address major substantive defects.[4]

Defects in the siting framework manifest themselves in the reactive nature of the process. The cause of many problems is a lack of complementarity among the Siting Act and its underlying foundations. The legislative intent in MEPA describes a planning process to balance environmental and other needs. Problems arise when siting decisions are made contrary to established policy directives of these documents. For example, the Siting Act relies on an EIS as the evaluative tool in decision making. Although different in format, this requirement is modeled directly from the EIS provision of MEPA. This provision emphasizes resource planning as the key to effective management, but the Siting Act establishes a process that makes decisions after the fact, once a proposal has been finalized. Combining the reactive nature of the process with the inability to assess key questions, decisions result in untimely, expensive delays and potentially rushed or inadequate reviews. Improvements to the Siting Act must focus on the reactiveness of its procedures that contradicts underlying policy assumptions.

Improving Montana's Siting Process

Structuring a siting process around a planning model enables resource management questions and decisions to be made from a wholistic point of view. In order to adapt Montana's process to this model, certain structural changes are necessary.

A. Phase I: Planning

One of the major problems with Montana's siting process is the lack of sufficient planning elements. These elements include a state forecast capability, alternative technology studies, presite review, review and definition of need, and advance notice. Specific recommendations follow.[5]

1. Forecasting. Except for the requirement that covered utilities submit ten year forecasts and plans to the Energy Division, Montana does not have a specific energy forecasting capability.[6] Under these conditions anything less than a cursory review of need is difficult.

The Energy Division appears to be a likely spot for a forecast capability. However, there is a potential for conflict between need assessment and other siting responsibilities. It may not be appropriate for the agency which determines need to have responsibility in the final approval or disapproval of a proposal. Similarly, the Department of Public Service Regulation has had some experience in demand forecasting through its responsibility for rate determinations. But, this responsibility to determine rate bases, prices, etc., would introduce a strong economic bias into any forecast. Therefore, neither of these agencies are entirely adequate places to have a forecast responsibility.

An independent agency, one capable of developing, gathering, and assessing forecasts as its only responsibility, introduces the least institutional bias.

Based upon the experience of other states analyzed in this research, it is recommended that *an Energy Act, which establishes a new and independent energy agency with the sole responsibility for collection, review, recommendation and statewide dissemination of energy forecast data for use in siting and other resource management responsibilities of all state agencies.*

Since the establishment of new agency may be politically unfeasible at this time, it is recommended that the legislature *pass an energy act which authorizes the Department of Public Service Regulation to assess and certify need for a facility. In addition, it should be given responsibility and power to develop, collect, review, recommend and disseminate statewide energy forecast data for use in all resource management actions. This responsibility should include input or forecast data from the Energy Division of the Department of Natural Resources and Conservation.*

2. Funding. In order to conduct continuous activities, the siting process must have a continued source of funding. Accordingly, a system which supplies money for all activities, regardless of a pending application, ensures that key questions are considered.

It is, therefore, recommended that the Energy Division develop an assessment schedule for the purpose of establishing an annual charge on the outputs of all energy producers. This charge should be used to fund all plannings elements. In addition, it is recommended that the application fee be maintained for funding of specific proposal reviews.

It is suggested that the forecasting provisions be funded from the energy assessments and placed in a separate revenue fund. Activities such as consideration of alternatives, and presite review should receive a percentage of the same assessment and be earmarked for the revenue fund established by the Siting Act.[7]

3. Consideration of alternatives. Options for a proposed facility depend upon viable or practical alternatives. In many cases, the choice of alternatives is limited by available technology, as well as regional and national considerations. Montana is in a position to determine the practicability of alternatives because of resources that will be sought in future years as answers to energy shortages. *Therefore, it is recommended that the Energy Division develop a continuing program of alternative technology covering various energy production sources studies including both normal and exotic facility types and their potential impacts. This program should be funded through a percentage of the annual energy assessment mentioned above.*

4. Presite review. Major facility site selection is one part of a broad field of land use and management. Site selection tends to focus on a range of actions. Land use legislation can be used to regulate most types of activities. Thus, the latter regulatory mechanism is potentially more useful in overall resource management than the former. However, there is no likelihood that a complete system of land use classification will be developed in Montana in the near future. Therefore, the necessity of early review of potential sites suggests that a less complex form of land use regulation be developed.

The site selection method which allows the most flexibility is Area Avoidance. This technique provide officials with a mechanism to state where facilities may not be sited without removing the perogative of industry to site plants.

Therefore, it is recommended that a site selection mechanism based upon Area Avoidance criteria be added to the Siting Act. Potential sites would be identified by industry and evaluated through a system of assessment criteria developed by the Energy Division. These criteria should eliminate undesirable sites and help to identify, but not certify potential sites. The process would involve a continuous review of potential sites from a list of possible locations identified by industry.

This could be done, for example, through annual long range plans submitted to the Energy Division. Possible sites would be chosen by industry from a list of sites not eliminated by avoidance criteria. Sites should be identified at least two but not more than five years before notice of intent is given. This action should be adopted during the 47th Legislative session.

5. Advance notice. The key to coordination between planning and decision making is a link that switches the review process from a generalized research to a proposal specific analysis.

The Siting Act has an optional provision for a notice of intent. Problems with this provision are numerous, but the most obvious drawback is its uncertainty. Similarly, there is no mechanism to coordinate the acceptance or rejection of applicant data by the Energy Division. Both these attempts at streamlining fail.

To help resolve this deficiency, *it is recommended that: (1) The notice of intent provision be changed from its current optional status to a mandatory requirement. Notice should be given at least one year in advance of filing a formal application. (2) A new section (under 75-20-214 MCA) should be added, which establishes a system of* *preapplication conferences to enable BNRC, BHES, DNRC, and DHES to discuss applicant data, to require additional application information, to address potential problems and to resolve unnecessary issues before the certification process begins.*

6. Review of need. The element review of need is a separate and distinct action from forecasting. Forecasting is a continuous process that gathers data for the evaluation of need when advance notice of a facility is proposed. A review of need is only the certification of a deficit in the supply of energy.

Two common siting mistakes follow from attempts to balance state, regional and national factors. First, because of the complex interrelationship of these factors, a definition of need is avoided because of questions of equity, federal preemption, and the 'self-fulfilling prophecy'.[8] Second, the unbalanced weighting of these factors disadvantageously places state considerations on the same level with regional and national factors. These attempts invite redundancy and future problems for siting procedures. While it is important to recognize all of these factors, the objective of the siting process is to ensure that the appropriate facility is certified, not to dispute need determination.

It is recommended that questions of need be answered and certified by an agency with little or no responsibility in the final certification of a proposal. The process of assessment should include the Energy Division and others. It should also be based upon weighted criteria developed to define, measure and evaluate key state, regional and national factors.

B. Phase II: Certification

Several changes should be made to the existing framework of Montana's Siting Act. These include changes to the application, site and facility review procedures.

1. Formal application. The filing of an application must accomplish three goals: to provide final notice of intent; to include all relevant data necessary for initiation of review, and to impose the least possible restrictions on all parties. The application process for the state is disjointed from other siting activities. Therefore, *it is recommended that the Energy Division design, in coordination with other agencies, a standardized application form. It should include provisions for both mandatory information to be supplied by all applicants and additional information deemed relevant or necessary according to the proposal.* Standardization of the application and use of a preapplication conference will help to reduce uncertainty and could result in a decrease in the time necessary for completeness review.[9]

Recent changes to the Siting Act allowing application amendments provide an opportunity for timely changes in an application. However, the provision for additional application fees to accommodate significant changes is only lipservice if the necessary time extensions are not also provided. *This section (75-20-213 MCA) should be further amended to include time extension to accommodate additional review by responsible agencies.* This change helps accommodate both significant changes and late or minor changes without requiring submittal of a new application.[10]

2. Separate site/facility reviews. Effective separation depends upon two distinct but coordinated reviews. Montana's process attempts to separate these review by splitting air and water quality issues from the review of other environmental factors. The process

has two drawbacks. First, the reviews occur concurrently and are therefore not logically separable. Second, overlap and duplication of effort occurs in the absence of any coordinating mechanism. For this reason, a presite review capability has been recommended. However, there are several procedural changes that also need to be made.

a. Approval of a facility and site involves the balancing of factors among alternatives. This does not mean approval of a specific size, type, and control technology for a proposed facility and selection of a site with the least environmental impact. Instead, the process should certify a facility based on need, and should ensure that air and water quality, and other environmental impacts are not excessive or unavoidable.[11]

Therefore, it is recommended that procedural steps for certification on the basis of air and water quality versus other environmental factors be maintained, except that (1) the DNRC be given six months from the receipt of a completed application to review sites submitted by the applicant; (2) once sites have been reviewed and accepted by DNRC as potential sites, the DHES review air and water quality issues for each alternative site, plus recommend a ranking of them based on air and water impacts, and (3) DNRC approval of a facility and site would consist of a balancing of air and water quality issues and other environmental factors to determine the best possible size, type, control technology and location for the proposal.

Site identification through preliminary approval of sites not excluded by avoidance criteria provides both DNRC and DHES with alternate locations for use in their review. Choosing the appropriate facility and location would ultimately rest with DNRC, but DHES would balance air and water quality issues between a set of alternative sites, and DNRC would continue to assess other environmental impacts of these different locations.

b. The existing system of accountability is not conducive to effective decision making. Although the decision by the DHES and BHES is binding upon the BNRC, a recommendation by DNRC is not. Thus, the different interpretation of data by the BNRC establishes a conflictual situation. Indeed, the BNRC may reverse a departmental recommendation and place the DNRC in a responsible position to defend a decision that goes against the departmental recommendation. This system of accountability must be clarified according to specific decision making criteria.

Therefore, it is recommended that the following changes be made to the Siting Act: (1) any agency relied upon for technical expertise during siting review should be considered the expert and any recommendations made based upon that review should be binding, subject to final approval through evaluation of weighted criteria by the DNRC or BNRC respectively; (2) the list of factors evaluated by the BNRC in its project be formally adopted by the DNRC who would evaluate the project through them, and recommend action on the proposal by balancing its own review and review by other agencies, and (3) the decision criteria and power of the BNRC be based upon a set of 5 to 10 weighted criteria including mandatory criteria, developed according to a limited set of key factors.

Decision criteria are stated in the Siting Act, but involve a complex balancing of numerous factors by the BNRC. Responsibility for evaluating these factors should be given to the DNRC, while the BNRC's decision should be based upon a system of five to ten weighted criteria. Decisions would depend upon one of three findings: (1) if all criteria are met, approval is obligatory, (2) if mandatory but not all criteria are met, approval is up to the discretion of BNRC, and (3) if mandatory criteria are not met, disapproval is necessary. Accordingly, the BNRC would still have authority to approve a project based upon its interpretation of the factors in certain cases, but also forced to accept departmental recommendations when all decision criteria are not specifically met. Weighted criteria development would necessarily involve participation by all parties.

C. Phase III: Monitoring

Ensuring continued compliance with the standards of certification involves an effective use of monitoring elements. Compliance has two components; detection and enforcement. Detection involves a monitoring system, while enforcement depends upon a system of penalties for compliance.

1. Monitoring system. Montana's Siting Act requires that a monitoring plan be developed by the state and industry. This plan relies upon state, federal and applicant financing. Due to its recent enactment, no specific plans have been established.[12] However, past experience and legislative language suggest that this monitoring plan could be used as a condition for certification.[13] This is not the correct use of a monitoring system. *Therefore, it is recommended that the Siting Act be amended to prohibit monitoring as a condition of certification and establish a monitoring system independent of specific facility proposals or those approved. This action can still include a joint state, federal and applicant monitoring, but emphasis should be on detecting any illegal emissions above established air, water and other quality standards. In other words, monitoring should not be used as a criteria of certification.* Money for funding of a monitoring program could be apportioned from an assessment on energy as well as other state,

federal and applicant sources. This should be a continual procedure that involves both DNRC and the DHES in ensuring compliance over all past or future certified facilities.

2. Compliance system. Detecting illegal emissions must go hand in hand with enforcing penalties for noncompliance. Penalties should have a three pronged approach involving civil penalties, pollution taxes, and revocation. The goal of the compliance system is to promote desired environmental behavior and punish undesirable behavior. A system of compliance that ensures compliance with provisions of the Siting Act, and also punishes noncompliance with certification standards through a system of fines is important. Finally, revocation is necessary to deal with continued cases of gross noncompliance. However, Montana's process has only two of the three necessary elements.

Therefore, *it is recommended that the Energy Division, in coordination with the appropriate division of Department of Health and Environmental Sciences, study and develop a graduated system of pollution fines to be assessed against certified industries who fail to meet the standards that were the basis of facility certification. Money from fines levied against noncomplying industries should be placed in the earmarked revenue fund established by the Siting Act.*

Conclusion and Recommendation Summary

Montana has established a strong environmental framework for making siting decisions. But, problems occur when established siting procedures do not conform to this framework. Establishing strong environmental and controlled growth policies, and relying upon an reactive decision mode as the basis of the siting process is the cause of many problems. Manifesting themselves in the form of timely and costly delays, and the inability of responsible agencies, such as the Energy Division, to address key questions, these problems work to defeat a prime objective of siting; i.e., that only needed and appropriate facilities be certified.

In order to resolve many of the potential conflicts, several recommendations have been made to move the siting process from its reactive mode to a planning process. Recommendations have focused on both structural and procedural defects which have the potential to hamper the process in the future. In most instances, the recommendations call for adoption by the 47th Montana Legislature. The following recommendations are categorized according to their importance.

A. Primary recommendations are direct actions designed to structure a proactive decision mode for siting within the state. They include the following recommendations.

– It is recommended that Montana's 47th Legislature adopt an Energy Act, designed to establish an independent agency responsible for collection, analysis and dissemination of energy information and certification of need for a proposal. There are two suggested options:

a) A new and separate agency solely responsible for forecasting be established.

b) Responsibility for forecasting and need certification be given to the Department of Public Service Regulation to establish a separate agency to conduct forecast duties within the Department.

– It is further recommended that the agency selected to certify need also be responsible for assessment criteria and seeking public and private interest group input into the criteria development.

– It is recommended that an annual assessment or tax on the output of all energy producers in the state to help fund the continuous activities of: forecasting, presite review, consideration of alternatives, and monitoring.

– It is recommended that a presite review capability called Area Avoidance be given to the Energy Division who would have responsibility for developing site assessment criteria.

– It is recommended that an alternative technology studies progtam be developed to analyze different facility and pollution control technologies. This is to be funded through the energy assessment.

– It is recommended that a continuous monitoring program, including both DNRC and DHES be developed to ensure compliance with certification standards. The system should no longer be a condition or basis for certification.

B. Secondary recommendations are those designed to modify existing siting structures to reflect the proactive decision mode. They include the following changes.

– It is recommended that the process of agency review be modified by providing: (1) a six month site evaluation period by the Energy Division; (2) the start of DHES analysis and hearings after sites have been initially approved by DNRC; and (3) that DNRC balance not only air, water and other environmental factors, but determine the best possible size, type, control technology and location for a proposal based on its own and DHES reviews.

– It is recommended that the Siting Act be amended to reflect these agency orientations and responsibilities: (1) any agency relied upon because of expertise should have any recommendation made based on their review binding on decision makers, but subject to final scrutiny through weighted siting criteria; (2) existing criteria established in the Siting Act be formally adopted by DNRC for use in evaluating its own and other agency review; and (3) the BNRC decision criteria be changed to a set of 5 to 10 weighted criteria based on key factors. The criteria should include both discretionary and mandatory criteria. Final BNRC decisions would be made by (a) if all criteria are met, project approval is obligatory; (b) if mandatory but not all criteria are met, the BNRC may decide to approve or reject a project on its own interpretation of relevant data; (c) if all the mandatory criteria are *not* met, rejection is obligatory.

C. The final set of recommendations include those felt necessary to resolve existing weaknesses or defects in procedural requirements.

– It is recommended that the Siting Act be amended to require mandatory advance notice, and a system of preapplication conferences.

– It is recommended that the DNRC and DHES develop a system to punish deviation from existing environmental standards through a graduated series of fines on various levels of illegal emissions.

– It is recommended that a standardized application form to be developed by responsible siting responsible agencies. This system should require mandatory information but also permit additional information to be requested by agencies according to special or unusual situations, et cetera.

Conclusion

Siting questions will become increasingly important in the future. This is especially true as the United States continues its struggle with energy and related problems. Montana must establish a siting procedure that reflects a resource management orientation to ensure its continual control over those resources. However, such a process must not only consider state factors but also those of regional and national importance. A siting process which recognizes these factors and incorporates participation by all relevant parties will help produce the desired socially optimal decision more often than not.

FOOTNOTES

FOOTNOTES

Chapter 1

[1] Montana is a raw materials producing state in the sense that it has relied on production of natural resources such as copper, timber, coal, oil, natural gas and agricultural products for shipment out of state. While some resource refining exists (wood and paper products, and certain types of mineral smelting), the state has relied on the shipment of its natural resources to external markets and tourism as the mainstay of its economy. See Thomas Payne, "Politics Under the Copper Dome," in *Politics in the American West*, Frank H. Jonas (ed.) (Salt Lake City: University Utah Press, 1969), p. 203.

[2] John Baden et al., "Colonization of the West: Human Values, Development and Institutional Design," *Western Wildlands*, Vol. 3, No. 3, 1977, p. 40.

[3] Ibid., p. 43.

[4] The establishment of governmental policies and institutions ". . . that provide information and incentives which motivate environmentally sensitive behavior is a necessary link when attempting to guide the behavior of individuals toward their environment . . . environmentally sensitive culture leads to government policies and institutions regarding common pool resources which produce information and incentives that reward environmentally sensitive behavior and penalize behavior destructive of environmental quality," Ibid., p. 43.

[5] Thomas Payne, "Politics Under the Copper Dome," p. 203.

[6] The resource development trends began around the same time as the famous Lewis and Clark expedition into the Northwest Territory. The fur traders followed closely behind Lewis and Clark, setting a pattern that was to be repeated again and again: take what you can and then move on. The next group to enter Montana were the gold miners. The influx of miners began in 1858 with the discovery of gold at Gold Creek. The lure of gold continued to draw a few miners but in 1865 the big gold strikes at Bannack, Alder Gulch and Last Chance Gulch brought thousands of gold seekers into the state. The third group into Montana, the cattlemen, followed the miners. The cattle industry began long before 1866. The resource in this case was the abundance of grass on the state's open ranges. The cattle were grazed on the open ranges, some were marketed as food for the growing number of miners, but the huge herds were driven to bigger markets. Other trends such as homesteading, land speculation and the railroads, mining, and others can also be traced in Montana history. However, these examples illustrate the types of trends that existed. Michael P. Malone and Richard Roeder, *Montana: A History of Two Centuries* (University of Washington Press, 1976), Chapter 9.

[7] The most colorful era occurred when placer mining was replaced by deep mining. Since most of the large gold deposits were assumed to have been discovered early, the

mining emphasis shifted to other precious metals. In fact, the arrival of the copper industry and the "copper kings" had a profound effect on the economic, political and social development of the state. "The most colorful and, perhaps, significant heritage of Montana's political past is derived from the titanic struggle for economic and political supremacy carried on for a dozen years before the turn of the century between the 'Copper Kings', William A. Clark and Marcus Daly. In brief, Clark, having built a huge fortune from mining and banking, aspired to a seat in the United States Senate, while his equally affluent adversary Daly, the founder of the Anaconda Copper empire, determinedly opposed these aspirations. Enormous sums of money were expended on both sides, augmented by the employment on an intensely personal and flamboyant basis of the newspapers owned by the two dynasties. Charges of large-scale bribery—some merely alleged, others proved—were fairly common . . . ."

Another major employer which wielded a substantial amount of political power was the Montana Power Company. Although it was closely tied with Anaconda Copper and supplied it with electricity, the two were never officially connected, and often differed on political approaches for protecting their best interests. While Anaconda Copper fought fierce battles in the political arena, Montana Power was content to influence its politicking on the grass roots level, lobbying quietly in the legislature and around the state. Carl B. Glassock, *The War of the Copper Kings* (Grosset and Dunlap, New York, 1953, cited in Thomas Payne, "Politics Under the Copper Dome"). Ibid., p. 204.

[8] In the mid 1940s, for instance, John Gunther wrote these famous words in his "Inside U.S.A.": "Anaconda, a company aptly named, certainly has a constrictor-like grip on much that goes on, and Montana is the nearest to a 'colony' of any American state, Delaware alone possibly excepted . . . In truth, however, for all its naked power and all its heavy handed manipulation of state policy, Anaconda never literally ran Montana. In fact, [both major companies, Anaconda Co., and Montana Power Co. today] act like most other extractive corporations in other states in the West, quietly lobbying for its interest in the legislature and complaining about new pollution standards and restriction on their interests."

Fragmentary politics still influence Montana policy, however, they are not overpowering and their emphasis has shifted. For example, the politics of coal development is a specialized issue affecting most energy facility siting decisions for Montana. Depending on several outside factors such as a national energy policy, demand for low sulfur coal and the prevailing market price, a key question becomes: Will the coal be mined and shipped out of state or will it be burned at power plant sites close to the mine itself? In either of these cases Montana siting policy is involved through (1) the Underground and Strip Mining Siting Act and (2) the Major Facility Siting Act.

[9] "The era of the copper kings is illustrative of the heavy handed manipulation which greatly influenced Montana's resource policy. The struggle between Clark and Daly demonstrated that control of the newspaper could be a powerful weapon for use in public affairs. It is not surprising that Anaconda Copper would aspire to purchase outright most of the state's major newspapers. Through this system of 'pecuniary

relationships' the company papers allowed Anaconda Copper to use its enormous power to block changes it deemed detrimental to its self interest. Thus, the press soon became neutral and remained politically sterile while under the ownership of Anaconda Copper.'' Thomas Payne, ''Politics Under the Copper Dome.'' Ibid., p. 211.

[10] ''The need for a more responsive government for natural resources is just typical of the problems which existed. Past responses to resource problems usually resulted in the creation of a new agency, commission, board or committee to deal with the problem regardless of overlapping or concurrent jurisdictions . . . in so doing the pattern was to follow the principle that each function of state government requires a single autonomous agency to perform it. . . . The overall result is that while the responsibility of the executive branch has increased tremendously there have been no significant adjustments made in overall patterns of organization of the executive. Consequently, the executive branch has grown into a cumbersome, fragmented and haphazard collection of autonomous agencies created at various times in response to needs and pressures of the movement.'' Montana Committee on Executive Reorganization, ''Executive Reoganization: Report to the Montana Legislative Assembly,'' December 1970, pp. 11-12.

[11] The early settlers were drawn to Montana by a treasure of resources, ranging from abundant copper, gold and silver reserves to vast stands of timber and a sea of prairie grasses. While these resources are still important, the emphasis today has expanded to new types of resources; coal, oil and natural gas, agriculture, and recreation. Along with the expanding resource economy the realization of the externalities of development has occurred. Two factors can account for this. The 'company press' in protecting its own interests often ignored or avoided environmental issues. But beyond that the papers were devoid of the safety valve device of letters to the editor. In sum, the readers ''were without a forum to serve a market place for ideas.'' In 1959, the papers were sold to the Lee Syndicate. This broadened the local awareness of environmental issues and was furthered by a second and later factor, the emergence of a national environmental recognition as embodied by the passage of the National Environmental Policy Act and celebrated with Earth Day. Thomas Payne, ''Politics Under the Copper Dome.'' Ibid., pp. 211-12; Authors analysis; Conservation for the social wefare, rather than private benefit is explained in: Baden, et al. op. cit. at pp. 40-45.

[12] Article II, section 3, Montana Constitution of 1972, 1947 R.C.M. Volume 1, Part 1, (1977 Supplement).

[13] Under Article IX of the Constitution, broad policy goals and idealistic pronouncements were made. Article IX contains five sections that deal with: (1) protecting and improving the environment, (2) reclaiming the land disturbed by mining, (3) water rights and the use of water, (4) preserving and enhancing cultural resources, (5) establishing a coal trust fund with money from coal severance tax. Each of these sections gives the legislature the power as well as a duty to accomplish these goals by stating that the ''legislature shall provide.'' Stephen D. Roberts and Albert W. Stone, ''Recent Developments in Montana Natural Resources Law,'' *Montana Law Review*, Vol. 38 (1977), p. 169.

[14] "Executive Reorganization." Ibid., p. 13; Article VII, Section 21, of the 1972 Montana Constitution, mandated reorganization of the executive branch to a maximum of 20 departments by July 1, 1973. As such the legislature passed the Executive Reorganization Act of 1971, 1947 RCM Title 82A § 101 et seq. (1977 Supplement).

[15] The birth of Montana's environmental movement is expressed in this excerpt: "Montana has only a short time in which to break out of century-long colonial status. The recent exploitation trends in coal and water and in speculative land development have been noted in the [1st Annual MEQC report] . . . Montana must seize the remaining opportunities for self-direction or lose the environmental quality and diversity that are her true and lasting wealth."

"Cooperation and coordination . . . between the executive and legislative branches is an important first step toward developing governmental capacity to foresee and modify the long-term consequences of actions taken for short-term benefits. The Montana Legislature has been quick in fulfilling its responsibility under Article IX, enacting a series of environmental bills since 1972." "Introduction to Recommendations," 1st Annual Report of Montana's Environmental Quality Council, p. 158; Stephen D. Roberts and Albert W. Stone, "Recent Developments in Montana Natural Resource Law." Ibid., p. 169; Also see Lyton K. Caldwell, "Freedom, Justice and Self-Determination: Reflections on Domestic 'Colonialism'," *Western Wildlands,* Vol. 3, No. 3, 1977, p. 30.

[16] MEPA–Montana Environmental Policy Act of 1971; 1947 R.C.M. Title 69, Chapter 65, sections 6501-6518 (1977 Supplement); NEPA-National Environmental Policy Act of 1969 U.S.C. Title 42 § § 4321 et seq.

[17] Sharon M. Soloman, "The Montana Environmental Policy Act (MEPA): An Overview," Professional Paper (Master of Science), University of Montana, 1974.

[18] By joint resolution the Legislature directed that a study be done on the feasibility of adopting an act similar to the Revised Model State Administrative Procedure Act developed by the National Conference of Commissioners on Uniform State Laws. The Legislative Council commissioned a two part study which reviewed the administrative procedures of the state and made recommendations for improving the situation. As a result the Montana Administrative Procedure Act was drafted and submitted. The Act was amended and approved during the special session of the 1971 Montana Legislature. John P. McCoy "Administrative Procedures in Montana: A View After Four Years with the Montana Administrative Procedure Act," *Montana Law Review,* Vol. 38, 1977, footnotes 9-11, p. 3.

[19] Montana Administrative Procedure Act, 1947 R.C.M. § 82-401 et al. (1977 supplement). For a discussion of how MAPA has worked see John P. McCoy. Ibid., p. 1.

[20] As amended the Montana Clean Air Act of 1967 is found in 1947 R.C.M., Title 69, Chapter 39, (1977 supplement). It is administered by the Air Quality Bureau, Division of Environmental Sciences, Department of Health and Environmental Sciences.

[21] As amended the Montana Water Pollution Act of 1967 is found in 1947 R.C.M., Title 69, Chapter 48, (1977 supplement). It is administered by the Water Quality Bureau of the Division of Environmental Sciences, Department of Health and Environmental Sciences.

[22] Although the Montana Acts may be stronger in substance, factors such as the federal Environmental Protection Agency's new Prevention of Significant Determination (PSD) regulations for air quality may ultimately prove strongest, especially if the many areas within Montana petition for a change in category under the EPA's air quality class standards. Gail Kuntz, *Montana Energy Almanac: 1978;* (Energy Division, Department of Natural Resources and Conservation), pp. 82-83.

[23] The Department of Health and Environmental Sciences was created under 1947 R.C.M., Title 82A, Chapter 6, (1977 supplement). Under this statute the duties and responsibility of the department, its subdivisions and its quasi judicial board, the Board of Health and Environmental Sciences, are found, 1947 R.C.M. § § 82A-601 and 602, (1977 supplement).

[24] Other permits may also be required (zoning permits, etc.), but the air and water quality permits are the major types and are important in later discussion of facility siting questions for Montana. The respective bureaus for air and water quality are found in Footnotes 20 and 21 above. For a list of all permits that are possible, see Steve Perlimutter, "An Environmental Permit Directory," Montana Environmental Quality Council (1978).

[25] Montana has two siting acts: the Major Facility Siting Act and the Strip and Underground Mine Siting Act. For discussion here, only the Major Facility Siting Act will be discussed since it is the broadest and applies most directly to major facilities. However, the Strip and Underground Mine Siting Act is a strong act. It provides for review (by the Department of State Lands) of any new strip or underground mine capable of displacing 10,000 cubic feet of materials. Any mine covered by the act requires a mine site location permit from the department. To do so, an application must be filed detailing the project and reclamation plans. The permit may not be granted unless the project meets the existing reclamation standards set by Montana law. For details, see Strip and Underground Mine Siting Act of 1974 as amended, 1947 R.C.M. § § 50-1601 et al. (1977 supplement); Reclamation statutes may be found in 1947 R.C.M., Title 50, Chapter 10, (1977 supplement).

[26] The Facility Siting Act is modeled after the National Association of Regulatory Utility Commissioners' (NARUC), "Model State Utility Environmental Protection Act," (November, 1970).

[27] Montana Major Facility Siting Act, (MFSA), 1947 R.C.M. § § 70-801 to 829 (1977 supplement). Due to recent recodification, two methods of citation are presented in this paper, since 1978 the Siting Act is codified as § § 75-20-101 to 601 M.C.A. (1978). This is used in later chapters and Appendix 4.

[28] As amended through 1977, the Act vests in the Department and Board of Natural Resources and Conservation ". . . the authority to require and review long-range planning by certain utilities, to give approval to energy generation and conversion plant sites and associated facilities, to require preconstruction certification of such facilities. . . ." Ibid., § § 70-801.

[29] Ibid., § § 70-804.

[30] Other agencies include the Departments of Health and Environmental Sciences; Highways; Parks, Recreation and Wildlife; Public Service Commission and others relating to information in their different area of expertise. Ibid., § § 70-807.

[31] The report by DNRC is essentially in the form of an environmental impact statement (EIS) as required by the siting act. This EIS is similar to the EIS required under MEPA. Although not in the same format it substitutes for the MEPA requirement. Ibid., § § 70-806 and 807; MEPA, 1947 R.C.M. § § 65-6501 et al. (1977 supplement).

[32] The siting process was substantially revised by the 46th Legislature (1979). A detailed discussion of the siting procedures is presented in Appendix 4. An analysis of the various amendments and suggestions for improvement are found in Chapter 5.

[33] The companies included Montana Power Company (30%), Puget Sound Power and Light Company (25%), Portland General Electric Company (20%), The Washington Water Power Company (15%), and Pacific Power and Light Company (10%).

[34] The Colstrip Application was received under the Utility Siting Act of 1973, however, the form and content of the Act had not changed substantially when it was amended to the Major Facility Siting Act. The Colstrip Case presents two important points. (1) The application was the first project of magnitude to test Montana's newly approved procedures for siting, and (2) the project's magnitude presents implications that extend beyond the project itself.

"As contemplated by the Application, Colstrip would become one of the largest coal-fired generating facilities in the United States—the four units together could produce enough power to light a city of 1,500,000 people. Moreover, because of the area's great coal resources and regional energy programs like the North Central Power Study, the proposal for Units 3 and 4 appeared to be the first of a series of applications and thus a test case." Turner Graybill, "Environmental Compatability and Public Need: A Case Study of Montana's Major Facility Siting Act," *Harvard Environmental Law Review*, Volume 1, 1976, p. 469.

[35] Judge Gordon Bennet, Opinion and Order, Northern Plains Resource Council and Northern Cheyenne Tribe, Inc., V.S. Board of Natural Resources and Conservation for State of Montana, Board of Health and Environmental Sciences for State of Montana, the Montana Power Company, Puget Sound Power and Light Company, Portland General Electric Company, the Washington Water Power Company and Pacific Power and Light Company, March 3, 1978 (?), No. 40462.

[36] MFSA requires that an EIS be done which is similar to but differs in format from the EIS required by MEPA. Thus, if MEPA were repealed an EIS would still be required by MFSA. See Footnote 31.

[37] Montana's Supreme Court recently overturned, in part, Judge Bennet's injunction of the Colstrip Project. The high court mandated that the BNRC review its decision on the certificate of environmental compatability and need, and ordered the Board to make specific findings based on the record of mine mouth versus load center generation, alternatives to the Colstrip complex, and other issues.

The Colstrip complex has run into numerous hurdles from both state and federal agencies. The most recent is the EPA's consideration of the Colstrip complex under the Pristine Air (Class I) designation for the Northern Cheyenne Indian Reservation. If the EPA accepts the amended design of the Colstrip project, a suit may be filed by the project's major opponent the Northern Plains Resource Council, on the grounds that the certificate is for a project designed back in 1973, and accepted in 1976, not the new plants proposed to the EPA in 1978-1979. The complex on the drawing board today is for two 778 (up from two 700) megawatt plants and the associated facilities. These articles briefly cover the Colstrip situation: "Colstrip Court Battle Far From Over," Bozeman Chronicle, May 6, 1979, p. 10; "New Legal Moves Suggest Court War Over Colstrip Far From End," Great Falls Tribune, May 5, 1979, p. 10, "Colstrip 3, 4 Pass Last Big Obstacle," Great Falls Tribune, September 9, 1979, pg. 1; "EPA Approves Colstrip 3 & 4," Billings Gazette, September 13, 1979, pg. 1; "Construction to Begin Soon on Colstrip Generators," Great Falls Tribune, September 18, 1979, pg. 1; "Colstrip Encounters Further Opposition," Great Falls Tribune, November 12, 1979, pg. 4; "Further Fighting Looms on Colstrip," Bozeman Daily Chronicle, November 13, 1979, pg. 3.

[38] It can be argued that the Colstrip Case, merely because it is the first major test of the siting act, is not a true measure of the process's strength or weakness. Although no official applications have been received for other energy plants, the State of Montana is currently reviewing the proposal of the Northern Tier Pipeline Company of Billings, Montana, to build a pipeline from the Washington coast across the Northern Tier states to carry Alaskan oil to midwestern refineries. A reflection of the concurrent siting conflicts can be seen in the number of bills introduced during the 46th Montana Legislature dealing with the Siting Act. Those bills range from bills to totally gut the Act, to compromise bills like the one which was finally passed amending the siting act. Due to the recent enactment of this bill, discussion will be postponed until a later section in this report.

[39] These perspectives reflect a deeper environmental conflict; Montana, as a state of abundant resources, should and does have a responsibility and willingness to share these resources with the region or nation, however, resource development can occur only to the limits that ensure the ability and willingness of the state's people and her natural ecosystems to buffer the impacts of that development. Thus, the cry of the environmentalist echoes the feeling that the state's resources should be protected at all costs; in direct conflict with that of industry who claim a right to develop resources. The key to this issue is that Montana's citizens must have a say in how and when the state's resources are used. Such a policy preference is established by Montana's Constitution, Environmental Policy Act, air and water quality statutes and promoted in the Major Facility Siting Act, but, to date the process has not functioned as it was conceived. These problems must be analyzed to avoid haphazard attempts to temporarily address substantive defects.

[40] The concern over development of a siting process to ask these questions lead to the search for a funding source to study Montana's Siting process. The result was the Ford Foundation Grant. A discussion of this six phase project, of which this report is a part, can be found in Appendix 1.

Chapter 2

[1] In inventorying the different state siting processes, a variety of ways to address developmental impact were uncovered. For example, 25 states have siting statutes; 15 states have forms of 'little NEPA's'; 7 have land use statutes; 11 have a coastal zone management acts, plans or proposed programs; 9 have administrative procedure acts; 7 have state energy acts; 12 have a number of local zoning, state permits or rely entirely on federal permits; and finally 7 have some other form of statute affecting siting of major facilities. One method is often used in combination with another, and a state may have as many as four major statutes which deal with major energy or industrial facility siting decisions. See Appendix 1, Table A.

[2] Regionalism is discussed in: Martha Derthick, *Between State and Nation*, Brookings Institute (Washington, DC, 1975).

[3] An example of such an organization is the Western Governors' Regional Energy Policy Office (WGREPO). The Office was established in 1975 by the Governors of Arizona, Colorado, Montana, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Utah and Wyoming.

It was organized to "... develope better methods of coordination and cooperation with federal agencies ... and to provide input in the early stages of the federal decision making process." *Sierra Club Bulletin*, Volume 61, Number 3, March 1976, pg. 25.

[4] "Neither the federal government nor most of the Western States are anxious to settle their differences in court. While judicial resolution of the respective authority of

each with regard to environmental control over public domain would clarify the matter, such clarification would be achieved at the risk of loss to one part of jurisdiction over such lands. A court might severely diminish federal regulatory authority by determining that a policy favoring the rights of states to regulate environmental impacts on public domain lands within their borders is an interest reserved to the states by Congress in the Mineral Leasing Act [see Texas Oil & Gas Corp. v. Phillips Co., 277 F. Supp. 366 (W. B. Okla. 1967), aff'd. per curram, 406 F.2d 1303 (10th circuit); cert. denied 396 U.S. 829 (1969)]. On the other hand, a court might be persuaded that this state interest must be subordinated to the overriding Congressional policy reflected in the Mineral Leasing Act which encourages federal mineral development to meet the needs of the nation [Northern Power Co. v. State of Minnesota, 447 F.2d 1143 (8th Cir. 1971), aff'd. mem., 405 U.S. 1035 (1972)]. The latter conclusion could effectively preempt any state control over federal energy development 'programs'." Louis Shapiro, "Energy Development on the Public Domain: Federal/ State Cooperation and Conflict Regarding Environmental Land Use Control," *Natural Resource Lawyer,* Volume 9, Number 3, p. 434.

[5] Timothy A. Hall et al., "Western States and National Energy Policy: The New States' Rights," Department of Political Science, University of Oklahoma. A paper presented at the Annual Meeting of Western Political Science Association, March 16-22, Los Angeles, California, 1978; see also note 10.

[6] The reasons behind exclusion of the public in such decisions can be associated with different circumstances. One reason for past exclusion was the technical nature of questions on the reliability, adequacy of service, and complexity of biological systems. A general notion which was prevalent can be summarized; the public did not understand the nature of the questions which were being asked, therefore the state, as representative for the public, played a dual role as regulator and representative for the public. Today public involvement has become a political issue and decision makers are finding it to their advantage to utilize 'the public' in decision making rather than trying to guess what the public really wants. See footnote 8.

[7] Brief discussions of the costs and benefits of public involvement can be found in the following: Lloyd C. Irland and J. Ross Vincent, "Citizen Participation in Decision Making a Challenge for Public Land Managers," *Journal of Range Management,* Volume 27, Number 3, (May 1974); Peter H. Schuch, "Public Interest Groups and the Policy Process," *Public Administration Review,* March/April, 1977; Edgar Shor, Introductory Comments; "A Symposium: Public Interest Representation and the Federal Agencies," *Public Administration Review,* March/April, 1977.

[8] The role of industry is important, since the state needs to rely on information supplied to them by an applicant. However, the state and industry should stipulate a common data base from which projections and decisions are made. Thus, while the state must receive certain information from the applicant, it should not be totally dependent on that material for its own analysis. Similarly, reliable information from the applicant helps to ensure that major stumbling blocks are avoided. This can be combined with 'public' input.

Public is a general yet complex term. There is no single identifiable "public." It is more realistic to look at 'the public' as a series of different groups which have divergent interests and backgrounds but yet rally around a commonly help belief. Different 'publics' can be identified by classes such as: recreationists (including bikers, hikers, hunters, fishermen, skiers, etc.), conservationists, timbermen, farmers and ranchers, etc. Membership in one public does not exclude membership in another or several different 'publics'.

It is advantageous to consider many divergent viewpoints when assessing what is in the public interest. While this task appears to be nearly impossible, it suggests something about the use of the different publics in siting decisions. Since the state is responsible for protecting the public interest, but cannot possibly please everyone at the same time, the uses for public input might best be directed at comments on documents like environmental impact statements and on the design and weighting of siting criteria for the evaluation of impacts and leave the specialized work of biological assessment to experts in that area, for example, a state agency.

[9] Sharon M. Soloman, "The Montana Environmental Policy Act (MEPA): An Overview," Ibid., pp. 28-30.

[10] Montana's official realize the importance of providing state input into regional and national decisions. For example, the Western Governors Regional Energy Policy Office provides a vehicle for such input (see note 3). Another example is the Bonneville Power Administration's (BPA) proposed reorganization. In 1978 changes were proposed to "... charge the [BPA] with responsibility for working with State and regional interests to conserve electric power, institute more realistic pricing of electricity, develope renewable energy technologies, and increase public involvement in power planning and policymaking." While only portions of Montana and its citizens directly benefit from BPA power, the consequences of Pacific Northwest power demands have a much greater impact. For example, the development of Montana's coal and the future placement of additional coal fired and other power plants in the state may occur in order to help supply power to the Pacific Northwest. As such, the state's comments were directed at increasing the amount of state input into BPA decisions. These and other actions by state officials are commendable, but it only emphasizes the need for increased awareness of future opportunities for voicing opinion over areas of direct state concern. This will become of increasing importance in light of President Carter's plans for an Energy Mobilization Board. Jeffery P. Foote et al., "Bonneville Administration: Northwest Power Broker," *Environmental Law,* Volume 6, 1976, pp. 831-58; "Region at the Crossroads–The Pacific Northwest Searches for New Sources of Electric Energy," GAO Report EMD-78-76, August 10, 1978, Cover statement; Authors own reflections.

[11] Major facilities have impacts on three basic human environments; the social, the economic and the ecological. Further, the extent of desirable and undesirable impacts caused by a facility increase with the size, type and cost. Thus, the impacts of a proposed facility on any of these three environments often places siting decisions into a

political context. Therefore, as discussed previously in this chapter, it is important to include three principal parties in the siting process; the state, the industry (applicant) and the public.

[12] Hall, et al., "Western States and National Energy Policy: The New States' Rights." Ibid., p. 1.

[13] Based on author's own assumptions from work on energy facility siting studies.

[14] By broadly defining a "siting process" an overview of how each state chooses to regulate energy and other major industrial facilities was obtained. This approach provides more insight into the siting question than a simple survey of existing siting statutes. It allows analysis of the complexity of the siting process, its coordination, coverage, and basic requirements. See Appendix 1.

[15] Drexel D. Journey, "Power Plant Siting: A Road Map of the Problem," *Notre Dame Lawyer*, Volume 48, 1973, p. 273.

[16] Before the shift there was no unified body of thought to guide electric power siting issues, as a result, these problems emerged:

1. a needed limitation on state domain issues for cases of interstate transmission lines,
2. a clarification of public policy for governmental lands, and
3. coordination between institutional policy views of public, private and cooperative utilities in matters of taxes, capital/cost relationships and autonomy of ownership and other circumstances were so general that complete agreement could not be reached on any of them. 1964 National Power Survey, Federal Power Commission p. 96, as cited in Drexel D. Journey, "Power Plant Siting: A Road Map of the Problem." Ibid., p. 275.

[17] The FPC's 46th Annual Report to Congress state the change in emphasis: "The Commission recommends examination of existing institutions for regional coordination . . . for interconnection of systems . . . for developing and applying reliability standards . . . for employing extra-light-voltage transmission . . . for securing needed rights-of-way . . . for assuring that small systems reasonably share in the economic and reliability benefits . . . and for maintaining continuity of bulk power supply" (7-8, 1966). Federal Power Commission's 16th Annual Report to Congress (1966), pp. 7-8, as cited in Journey, Ibid., p. 275.

[18] Journey cites three National Studies which give impetus to these problems:

– *Report to the Vice President's Council on Recreation and National Beauty* Working Committee on Utilities (1968).

– *Considerations Affecting Stream Power Plant Site Selection*, Office of Science and Technology (1970).

– *Electric Power and the Environment*, Office of Science and Technology (1970); Ibid., p. 276.

[19] A similar theme is presented in: Lauren McKinsey, "Consolidated vs Fragmented Structural Approaches to Environmental Protection," Prepared for delivery to the Western Political Science Association, March 20-22, 1978, Seattle, Washington, pgs. 1-3.

[20] The crux of the siting issue has been argued by many on both the state and national level as a problem of balancing increasing demands for energy, jobs and material possession against environmental degradation. However, it may be premature to say that the American standard of living will decline; it is acceptable to say that it can no longer continue to grow unchecked. The magnitude of the siting dilemma involves issues of national significance. Energy availability is the key factor in economic growth. Thus, the decision against a power plant may affect more than a single State. For example, the 1970 National Power Survey stated: "Deterioration of the quality of electrical service would itself and through its economic reprecussions degrade our national life. . . . That is the crux of the power issue facing the nation today. . . ." Although the discussion focuses on delays in certifying new power plants, the problem can be expressed broadly to include the realization that not only energy demands but also industrial demands must stop escalating; i.e., there is a tradeoff between the status quo and more. A similar trend can be seen today, as the U.S. struggles for energy independence. This struggle will have a significant impact on facility siting issues. Indeed, the western states face much more of a siting dilemma in terms of supplying coal and other energy resources to the nation than in the paper. Drexel D. Journey, "Power Plant Siting: A Road Map of the Problem." Ibid., p. 273; Hall et al., "Western States and National Energy Policy: The New States' Rights," Ibid., pp. 6-18.

[21] In Chapter 1, the theory of political economy was presented to explain the development of natural resources and illustrate the necessity of governmental policies and institutions which will motivate environmental behavior and punish environmentally destructive behavior, see Chapter 1, pp. 6 to 9 and associated footnotes.

[22] Drexel D. Journey, "Power Plant Siting: A Road Map of the Problem." Ibid., p. 274.

[23] In assessing the siting process of other states several questions were asked to determine answers to the basic issues of what, how, when, whom and where. See Appendix 2.

[24] The intention here is to illustrate two types of general policies that work to influence a formalized siting process. A siting process which reflects a controlled growth, strong environmental protection policy would be more detailed than one built on strong growth, weak environmental protection policies. The former example tends to promote balanced growth through stringent environmental protection, while the latter tends to foster active growth by accommodating more environmental tradeoffs. Montana has already established certain policies for its siting process. Briefly those policies include:

1. Montana's constitution makes the provision of a clean and healthful environment a duty of the state and its citizens now and in the future.

2. Montana's Environmental Policy Act reemphasizes this 'right' and establishes a planning framework for environmental analysis.
3. Montana's development policy is best stated as one of controlled growth. This can be evidenced by the reliance on a natural resource economy and yet restricted by such legislative enactments as the Coal Severance Tax, Yellowstone River Water Moratorium and numerous environmental protection statutes. However, the problem with Montana's Siting Process is a failure of these policies to complement each other. This theme is developed in later chapters in more detail, but the problem as perceived by state officials and others is not simply the reactive nature of the process, but the underlying failure of the siting act to complement those policies. Thus, the problem lies in a failure to develop a proactive approach to siting issues which is repeatedly emphasized in MEPA, and necessary for continued economic growth. The reactive nature of the siting process is merely an extension of the problem which manifests itself in the form of costly, time consuming reviews and the inability of state officials to ask key questions about need, alternatives, etc.

[25] The state and its citizens can be called 'the society'. The theory of political economy states that the optimal decision is the one which maximizes social welfare. This can become complicated when regional and national considerations are included, but the protection of the states' environment is the primary concern for which most social benefits should accrue directly to the state and its citizens while costs are dispersed to the nation or other states. Tradeoffs among development and the environment are made in this context.

[26] No attempt is made to define what is meant by 'maximum value and minimum threat', however, the biological significance of different environmental factors on the human ecology is often the basis for assessing such impacts. The choice between the two decision modes may be influenced by a number of factors including: population density, industrialization, and economic conditions. It can be hypothesized that factors such as those mentioned, among a host of others, influence the choice between reactive and proactive modes. Such a hypothesis remains to be tested, but several assumptions can be stated: (1) the reactive mode is best suited for a state which is populous and industrialized, (2) the proactive mode is best suited for a state with low population, wide open spaces and with little or no major industrialization. Lauren McKinsey, "Consolidated vs Fragmented Structural Approaches to Environmental Protection," Ibid., pp. 27-9; see note 26 for further explanation.

[27] A general theme is borrowed from McKinsey and expanded here. The subordination of one policy to another is probably best suited to an industrialized and populous state. The inductive mode may, logically, be the most efficient and useful approach in such a state since an incremental increase in air pollution, for example, may have a greater impact on the health, safety and welfare of a state's citizens. In this instance the ability to subordinate general policies of development or the environment to one another may allow the state to exercise regulation in the interest of protecting its

citizens. Thus, a state which is already industrialized may not need the flexibility that a proactive approach can provide for guiding future resource decisions. The logic of an inductive mode may also dictate acceptable conditions for the use of this approach. For a state with wide open spaces, a small population, et cetera, the proactive mode will allow greater flexibility in choosing between acceptable and unacceptable areas for development. This flexibility is important in assuring that development and environmental policies are complementary by allowing development only in areas where it has been approved and only allowing certain types of developments. This can logically be done in a sparsely populated, wide open state where there is a range of choices between development sites (Ibid., p. 29).

[28] Raymond J. Suppalla, "Land Use Planning: An Institutional Overview," *American Journal of Agricultural Economics*, December 1976, p. 895.

[29] Grover Starling, *Managing the Public Sector*, Dorsey Press, December 1977, p. 123.

[30] Ibid., pp. 128.

[31] Ibid., p. 129

[32] The rest of this chapter is devoted to the discussion of the basic premises of the siting framework, i.e., what are the important considerations (Steps 1 and 2). Chapter 3 will focus on the structural design of a deductive siting process (Steps 3-5).

The design of a proactive siting process is based on the planning model developed by Starling and the author's own conclusions about siting, (see note 26).

[33] James Nealbrod, "Industrial Site Selection: Existing Institutions and Proposals for Reform," A Final Report of ABA Special Committee on Environmental Law, *Nebraska Law Review*, Volume 55, 1976, pgs. 440-51.

[34] The issue of the proper decision authority is directly related to the type of agency decision process; i.e., a lead agency, joint agency, or separate agency decision. F. R. Anderson discusses these roles in talking about environmental impact statements in general.

"Preparation of an impact statement through the lead agency device leaves something to be desired. It increases the likelihood that the exempted agencies will engage only in 'pro forma' consideration of the statement, when they are fortunate enough to find another agency that will undertake the time consuming chore of identifying potential environmental impacts. It removes from the agency best equipped to know the full effects and future consequences of a course of action the basic responsibility for having identified and discussed them. It allows the agency to 'contract out' a task which if done internally would help bring about the shift in agency values and attitudes that [the process] was intended to initiate. It allows agencies to cumulate impacts, which is desirable, but at the same time it enables each of them to escape focusing individually upon the particular impact of its own part of the overall action.

"Of course these criticisms of lead agency statement preparation in no way detract from the strength of criticisms that can be made of alternative techniques for handling multi-agency actions. Preparation of separate agency statements on each part of an overall action ensures maximum participation of all agencies involved, but at a cost in coordination of cumulative impacts. Joint statements involve all agencies to a somewhat lesser degree and advise coordination, sharing of expertise, and consideration of cumulative impacts, but at the risk of poorly defining ultimate responsibility.

"On balance, however, of the three basic approaches—separate compliance, joint preparation, and lead agency preparation—the standard of compliance 'to the fullest extent possible' would seem to require that the first two alternatives be favored over the last one." Sharon S. Solomon, "Montana Environmental Policy Act (MEPA): An Overview," Ibid., p. 26, citing F. R. Anderson, Council on Environmental Quality's (CEQ) Third Annual Report (1972), Note 2, pp. 199-200.

[35] Three primary categories of siting agencies can be identified. They group the agencies by general orientation and can be described as: (a) those with an economic orientation, including Public Service Commissions, State Corporation Commissions, and State Planning Agency or their equivalents; (b) those with an environmental/ecological orientation such as Natural Resource, Conservation or, Environmental protection agencies, bureaus or their equivalents; and finally (c) those with a mixed bag orientation which consist of public members, industry members, and expert members identified by title or expertise, or position in state government, who, as a group are the independent siting authority. This category includes the various siting councils, boards, or committees established especially to deal with siting questions.

Analyzing the experience of other states enables one to conclude that if a bias exists and is recognized it can be dealt with through the legislative process. For instance, by giving an economically oriented agency responsibility for social and ecological analysis as well as review economic factors, bias is reduced. The same can be said for an agency with an environmental bias. An alternative to this approach is to emphasize a balance as represented by the mixed bag orientation. Although to be balanced, this approach must also be backed by statutory requirements that it be so. Statutory responsibility may not eliminate institutional bias, but it will reduce the tendency for blatantly biased analysis.

[36] This discussion relies on the untested hypothesis discussed earlier in Chapter One and in Footnotes 25 and 26 here which states that certain policies appear better suited for different conditions involving population, economic conditions, industrial development, et cetera.

[37] While it is possible to have a complete reactive approach the logic of such a decision mode does not seem to fit the requirement for an optimum decision based on factors of time, cost, etc.

[38] Although more empirical research on other intervening factors is needed, the assumptions made here are supportable. Indeed many of these inferences are borne out through an analysis of existing state siting processes.

[39] "State Perspectives on Energy Facility Siting, Executive Summary," National Governors Conference Publication, March, 1978.

Chapter 3

[1] Bureaucratic review has associated problems of zeal and lethargy. Zeal is complimented but, when overexercised, becomes counterproductive. On the other hand lethargy is despised and leads: to inadequate reviews, inability to regulate effectively, et cetera. Therefore, several key points in designing institutions and utilizing policy biases should be noted, they include: (a) expertise, i.e., who has it; (b) responsibility, who should or should not be given it; (c) experience, i.e., who has the necessary staff and capability (closely related to expertise); and (d) other endeavors, i.e., who can devote the necessary time and resources. All of these factors, as well as those mentioned in Chapter Two (notes 34,35), are necessary to understand agency and institutional bias. Lewis Bart Stone, "Power Plant Siting: A Challenge to the Legal Process," *Albany Law Review*, Volume 36, No. 1, 1971, p. 23.

[2] Mason Willrich, "The Energy-Environment Conflict: Siting Electric Power Facilities," *Virginia Law Review*, Volume 58, No. 257, 1972, p. 336.

[3] Through the framework of a complete proactive siting process, essential elements are identified and developed to establish a siting model. Each of these elements has certain component parts which determine the strength of the element and its effectiveness in providing useful information for the siting process. They will also be discussed. Finally, the approaches taken by other states will be briefly reviewed against the model process.

Regulation through the informatory process is expressed in two articles: Drexel D. Journey, "Power Plant Siting–A Road Map of the Problem," Ibid., p. 273; and John Baden et al., "Colonization of the West: Human Values, Development, and Institutional Design," Ibid., p. 39.

[4] The following process consists of steps 3-5 of the planning model discussed in Chapter 2. It is based upon the author's own observations as well as recommendations of the National Governors' Conference in "State Perspectives on Energy Facility Siting; Executive Summary," Ibid., pgs. 10-43.

[5] James Nealbrod, "Industrial Site Selection: Existing Institutions and Proposals for Reform," Ibid., p. 449.

[6] See Chapter Two's discussion of the Basic Planning Model.

[7] In this way, predictions by the state and industry which greatly differ can be narrowed down to problems of data interpretation. Without a common data base, state and industry often quibble about interpretation, since no common ground for decision making exists. Thus the conflict over whose data is correct cannot be easily

resolved. An example would include pollution control equipment, i.e., best available technology. Conflict and delay occurs when the state determines that the best equipment available is quite different from that industry believes to be the best.

[8] Industry forecasts should be taken into consideration since it may not be necessary or even possible for the state to replicate similar forecasting techniques. However, proper planning requires the accumulation of a considerable amount of data and information. Further, periodic updates, retrieval and manipulative capacities, and the understanding of different forecast methodologies are essential to the state forecast capability.

[9] Depending on the use of the forecast, its length and flexibility, information requirements will vary. Information from industry must be evaluated along with that developed by the state. Knowledge about industries' methodology, its use of the data, economic analysis reports and other general data which would contribute to the overall picture of need requirements should be obtained. There is room for negotiation on what data is necessary to clearly evaluate the need question, but a state should strive to attain all the information required to do complete analysis.

The components discussed here are not exhaustive. Rather, they describe essential parts for the information gathering process which a forecast provision should provide. Similarly, other element components will be identified in this manner.

[10] Much of the information obtained by the state could be held confidential to protect against any competitive interests. But, in such cases where the industry is providing a public service as a utility, and when competitive advantage is slight, the state should seek as much information as possible about the industry's development and planning methods. The requirement that long range forecasts and plans of industry be filed is only part of the planning process by state agencies.

[11] It is often expressed that once determined, need ensures that a facility will be built. This view is overly simplistic and fails to understand the primary objective of a siting process which is to determine what action out of a range of alternatives best meets a determined need. For example, a projected shortfall in electrical supply over demand does not automatically signal the need for a new electrical generation complex. Instead, the consideration of alternatives takes need as a given but assesses other options such as conservation, and alternate technologies which also can be used to meet that need.

[12] Limiting the analysis of alternatives to a set of preselected choices often occurs through policy. For example, a strong environmental policy in connection with a controlled growth policy should logically reflect a wider range of alternatives than a stance dependent on a strong development/weak environment policies. In the first case, the number of alternatives would include alternative technology studies which were less environmentally disruptive as well as a no action alternative. On the other hand, the latter policy would rely on fewer alternatives, and aim at protecting environmental quality through pollution control mechanisms, et cetera. Thus the focus

shifts from the type of alternatives considered in attempting to minimize environmental damage to those considered simply to meet environmental standards.

[13] In a state which considers a limited set of alternatives, the siting questions usually revolve around the type of power plant (i.e., thermal, nuclear, et cetera); the size of the power plant; the type of fuel to be considered, et cetera. These are considered normal technologies. In contrast to this, a state which considers a wider range of alternatives would address questions about the appropriate type of facility. This would go beyond consideration of normal technologies and extend into a review of other technologies such as solar, wind, biomass conversion and others, like conservation (including insulation, reducing the thermostat, et cetera). The distinction between approaches rests with underlying state policies on both development and the environment.

[14] *Electric Power and the Environment,* Office of Science and Technology, Federal Power Commission, 1970, p. viii.

[15] Holding two hearings is essential for these methods if formal certification and site identification do not occur concurrently. In such a case the hearings would determine (1) the availability of a site and (2) the suitability of the site. A combined process is possible, but it is subject to the time limitations discussed later. See note 16.

[16] The veto of a selected site later in the process is dependent upon the time limits, under which an identified site can be considered acceptable. But even then, the possibility of vetoing a selected site is substantially diminished.

In the case of site banking and inventorying, the update and review of sites must be done periodically. Changing conditions which may alter a site's acceptability cannot be ignored. Therefore, site banking and inventorying must be subject to restrictions on the length that a site, once identified, can remain under consideration without reevaluation of its acceptability.

A five year site selection process is fine for identification of potential sites, but is too long for actual certification. Mason Willrich, "The Energy-Environment Conflict: Siting Electric Power Facilities," Ibid., pp. 333-4.

[17] For example, for either of the two types of site banking a system of rotation must exist. Sites identified as acceptable should remain so for a period of two or three years before a reevaluation. The same rule should apply to avoidance areas, although the time period for periodic review may be extended depending on the potential for changes in conditions which prompted identification.

[18] "State Perspectives on Energy Facility Siting," Ibid, p. 33.

[19] Ibid., p. 41.

[20] Review of need does not have to be combined with a site specific or facility specific certification process. Rather, it should be an extension of the overall planning process. The agency assigned responsibility for reviewing need should be allowed to maintain the ability to choose from a diversity of development options. Ibid., p. 20.

[21] Forecasting is used to predict, but in order to do so accurately, the process must rely on updates to reflect changing conditions. While a yearly forecast may be done only once, quarterly or periodic updates are important to reflect any change in forecast assumptions. The consideration of alternatives also reflects an ongoing process, where the continual collection and assimilation of data is important to ensure accurate information, including alternative technology studies and increased technological efficiency in such areas as air pollution control. Similarly, no matter what site identification method is chosen, the presite review process should continually select and update the list of potential sites or avoidance areas.

[22] In essence, early disclosure signals the use of information generated by earlier elements. For example, information supplied by a state's forecast, presite review, and review of alternatives are extremely useful in identifying issues and resolving conflicts at the prehearing conference. Similarly, advance notice alerts both state officials and the public of a potential action and allows for a reassessment of the questions of need and alternatives.

[23] A separation or distinction between necessary certificates or permits in terms of applications may be required to separate site and facility reviews. Since certification of a site and certification of the facility occur within different time frames, an application for a site certification should be filed before an application for facility certification. It should be noted that an application is the formal initiation of the review process. A further discussion of this issue is presented under the element for separate site and facility reviews. However, these factors should be considered:

(a) The acceptance of an application would depend upon the evaluation of the information supplied by industry. Based upon this review, the application is accepted or rejected.

(b) When received, copies of the application should be sent to all agencies with permitting or other certification responsibility. These agencies can be useful in reviewing the application for completeness, according to their different areas of expertise, (specific information requirements are discussed later).

(c) The preapplication conference should be used to clarify application requirements and to identify additional information.

A rejected application should be returned with an explanation of any information deficiencies. A revised application can then be resubmitted, and if required information is provided certification should begin. Written notices to all affected localities; local governments; affected parties and a general public notice (in a newspaper of general circulation, over the radio, et cetera) should be given. This includes information about the proposed project site and a tentative schedule of hearings or other administrative proceedings. This relates to the development of a timeframework for review among cooperating agencies. The benefits of this mechanism in coordinating individual agency reviews is discussed in the separate certification for site and facility section.

[24] Examples of the information required would include: preferred site, preferred facility and their alternatives; why and how the preferred site or facility was chosen; information on impact studies dealing with the social, economic and ecological environments; cost and financing information and their impacts; the type of fuel and its impacts, water requirements, et cetera.

[25] This provision can be advantageous to all parties involved by providing a mechanism for change on a proposal to occur without triggering a completely new certification procedure. Such a process enhances the possibility that an optimal decision is made by allowing facility changes to reflect environmental factors not considered by one or another of the parties. Specifically, the amendment process allows flexibility for minor changes, yet controls major proposal revisions by providing additional or extended review periods.

[26] Coordination between site and facility review is also necessary to deal with questions unanswerable in separate reviews, for example, site impacts based on the type of facility. However, much of the information necessary to conduct separate site and facility reviews is provided through the planning phase.

[27] Many of the site related issues can be identified in the presite review and consideration of alternative processes. Similarly, the implications of need also clarify many site related questions. The planning phase is crucial to identify how a determined need can be met. This identification is dependent on the state's policies, public determination of need, and alternative technologies considered. These factors then influence the determination of specific site characteristics which will compliment a particular facility.

[28] The importance of the participation by public and other groups in the certification of facility and site may best be focused on the resolution of combined (site/facility) questions, or conflicts and designing evaluation criteria for assessing impact studies. Further, coordination between facility and site reviews may best be handled through a public forum. In essence, the role of the state may be to perform technical studies of both site and facility, then present these assessments for public evaluation and hearing in order to determine appropriate weighting criteria.

[29] For example, the determination of need will suggest alternative facilities. Similarly, early alternative technologies studies will suggest the appropriate technology for pollution control, et cetera.

[30] "State Perspectives on Energy Facility Siting," Ibid., pp. 44-5.

[31] This is important because of the involved nature of the facility siting process. Limiting the scope of judicial review to such things as unanswered questions, a review of new evidence, errors in the certification process and to protect against unnecessary harm against a person or persons is important. However, the use of judicial review as a

delaying tactic or to protest a correct but unfavorable decision by one party is inappropriate. Ibid., pp. 44-5.

[32] Ibid., p. 10.

[33] The model just presented highlights the elements and important components of a complete planned siting process. The unique feature of this process is the ability to adapt to political and economic factors within different states. This flexibility provides a range of choice in implementing the various elements. Unfortunately, the process does not function optimally unless implemented as an integrated and coordinated whole. Thus, when only parts of the process are implemented, the decision making system changes to a more reactive type mode. The extent of the reactiveness depends on the type and number of key elements that are missing. Therefore, it is important to consider this fact during the following section. Through it, a discussion of what other states have done in terms of applying the necessary siting elements is presented.

[34] The lack of essential planning activities during the first phase of the process fails to provide the necessary information for the subsequent phases. Consequently, the other phases must 'react' by generating information to assess need, alternatives and impacts. However, the inability of agencies to do this data gathering without the proper expertise and capability means these key questions are inaccurately and poorly analyzed, if they get analyzed at all.

[35] Only states with siting laws are reviewed here for these reasons: (1) the coordination of activities provided by such a statute; (2) the issue of siting laws and what other states have done is the thrust of this report. The discussion is brief for several reasons: (1) the nature of the siting process is extremely complex and as a result anything but a general analysis would be bulky and unmanageable; (2) many of the provisions of existing state siting processes are provided in tabular form in the Appendix; and (3) the number and variety of miniscule differences between existing siting laws suggests that a more generalized analysis is the most useful. See Appendix 3, Table B, C_1-C_5.

[36] Interestingly, only three states allow for a variety of scenarios in forecast periods, i.e., 5, 10, 20 year forecast plans. Each of these states has authority to conduct its own independent evaluations of need; two through an energy act, New York (P.S.L. Article); Minnesota (Minn. Stat. § 3116H.01 et. seq.); and one, California (Pub. Res. Code § § 21100 and 25500), through a siting act.

[37] One of these eight, Kentucky, has just enacted a provision for a state forecast capability, but to date no action has been taken to define or implement that responsibility. Correspondence between William H. Bowker, Executive Assistant, Kentucky Department of Energy, and Bob Anderson, Administrator, Energy Division, Montana Department of Natural Resources. California (Public Res. Code § § 21100 and 25500

et. seq.), Florida (F.S. Part II § § 403.501 et. seq.), Kentucky (K.R.S. § 278.20, § .25-27), Maryland (Chapter 320, Acts of 1976); Minnesota (Minn. Stat. § 116H.01 et. seq. 1974); New York (SB-59186, April 6, 1978); Ohio (Am. Sub. H.B. 415, File No. 221, 1977); Oregon (O.R.S. Chapter 469 et. seq.).

[38] In the case of states which have some sort of presite review the consideration of site alternatives is much broader than that for facility alternatives.

Coincidently, of the eight states which have a process for presite review, five of these states (California, Florida, Maryland, Minnesota and Oregon) also have a provision for independent state forecasts (see Note 37).

[39] In Maryland, this process is limited to the review of 'normal' power plant technologies; i.e., efficiency and pollution control, and the study of impacts associated with different types of power plants (Chap. 31, Acts of 1971); California studies a broad range of technologies and impacts including solar, et cetera (Pub. Res. Code § 25600).

[40] Vermont (30 V.S.A. § 248); Wisconsin (Chap. 68, Laws of 1975); South Dakota (S.D. Rev. Codes § § 49-41B.5).

[41] All of these states except California have a state energy act which requires that state forecasting be done: California (Pub. Res. Code § 25500 et. seq.); Massachusetts (M.G.L. Chap. 164 § § 696-685); Minnesota (Minn. Stat. § 116.01 et. seq.); New York (SB-59886, April 6, 1978); Ohio (Am. Sub. HB 415, File 221, 1977); and Oregon (O.R.S. § 468, et. seq.).

[42] This differs from the submission of industry long range plans in that the forecast is analyzed by the state who may accept or reject industry's determination of need, in the former case industry's projections are simply adopted.

[43] An analysis of these elements and their components is not conducive to tabulation due to the variation among different themes throughout the phase. It is possible, however, to categorize them in general. See Appendix 3, Tables C_1 to C_5.

[44] As shown in Table 3, the major categories of required permits are: certification of environmental compatibility or its equivalent; a certificate of public convenience and necessity or its equivalent; and various other permits such as air and water quality. An X in either of the first two categories represents major permits required by siting statute. In some cases, for example: Arizona, Connecticut and Florida, these permits preempt all other state and local permit requirements. Thus, only these states with an X in the third category preempt other applicable state or local permit requirements.

[45] These represent the most common information requirements. For details, on individual state requirements, consult the "Inventory of State Major Facility Siting Processes," Volumes I and II, the working document for this report. See Appendix 3 for a summary of state provisions.

[46] An interesting sidelight to the amendment process is the provision of some siting acts to allow permits to be exchanged among utilities. This provision is subject to review by the certifying agency and the utility must agree to submit to the conditions and requirements stated in the permit.

[47] Although this is true, the extent that certification can be separated depends on the type of presite review. In other words, provisions for banking and inventorying allow greater separation than does site selection based on avoidance criteria, but they also may have associated problems of coordindation. This is discussed later in Chapter Four.

[48] The best example of this provision is found in the Wyoming statute, where the process depends on input from the State Engineer on water issues, the Public Service Commission for need, the Department of Natural Resources for environmental factors, and the Industrial Siting Council (ISC) as the final decision maker. Although ISC have authority over the whole siting process, it relies upon and encourages the help of these and other state agencies in providing expertise on the analysis of social, economic and ecological factors. Specifics of the siting process of each state can be found in the Appendix 3 Tables C_1 to C_5. Also see Jack L. Van Baalen, "Industrial Siting Legislation: The Wyoming Industrial Development and Siting Act—Advance or Retreat," *Land and Water Law Review*, Volume 11 No. 1, 1976, pp. 27-101.

[49] In some cases, the provision for judicial review follows a series of systematic administrative procedures established by law. For example, Connecticut, Minnesota, Montana, Wisconsin and Wyoming have administrative procedure acts which guide appeals. Other provisions such as administrative code regulations, et cetera, also come into play. However, the premise of such an act is the coordination of all agency actions, procedures and appeals.

[50] While some monitoring may occur through other statutory authority, some state siting laws do not specifically require that monitoring be done.

[51] Florida (Rules of the Department of Environmental Regulation, 17-17.13, (1977)).

[52] The provision for monitoring does not ensure that a comprehensive system be developed. For instance, monitoring capabilities may be underdeveloped, nonexistent or exist to comply only with the letter of the law. The monitoring authority may not have the power to enforce compliance to the proper extent.

[53] Minnesota, Oregon, and Wyoming also have powers to enforce compliance as well as produce data for further research. California (Pub. Res. Code § 25500 et. seq.); Maryland (Chapter 3, Acts of 1971 § 3-303); Minnesota (Minn. Stat. § 116C, 645, 68); Oregon (O.R.S. 469 § 440); and Wyoming (W.S. § § 35-502-91).

[54] This system may exist in the form of rule or regulation, but it does not have the force of a statutory provision. Variable fines, as a means of compliance, are important for ensuring that the minor and major infractions of noncompliance 'cost' an industry by making it more expensive to not comply than to comply.

Chapter 4

[1] Three major trends to change the relationship between government and industry in the area of facility siting have emerged. First, there has been an increasing disclosure of facility (i.e., especially utility) plans and forecases before the start of certification or other proceedings. Second, there has been a greater involvement in the planning process for major facilities in these basic arenas. legislative policy statements on planning or operating criteria (i.e., environmental standards); administrative actions affecting the decision process or work of planning (coordination of agency procedures, decision timeframes, et cetera); and finally direct participation by interested parties in the review of major facilities. The third trend, of equal importance as those above but neglected in many existing siting processes, is governmental recognition of the necessity for harmony between economic regulatory and environmental assessment requirements of a siting process. These trends have existed for several years and each state which adopts a siting act or process tends to expand the status quo. They are discussed in Drexel D. Journey, "Power Plant Siting: A Road Map of the Problem," Ibid., p. 293; for a good summary of the various power conflicts, and policy options, see Michael D. White, Hamlet J. Barry, III, "Energy Development in the West: Conflict and Coordination of Governmental Decision Making," *North Dakota Law Review*, Vol. 52, No. 3 (Spring 1978), pp. 451-528.

[2] Several types of statutes have been used to control major facility development. When used separately or in combination with one another, the following provide a vehicle for coordination among decision making bodies: (1) a Coastal Management Act, because of federal mandates in the Coastal Zone Management Act of 1972 (U.S.C. Title 16 § § 1451 et. seq.) and in Coastal Zone Management Act Amendment of 1976, (U.S.C. Title 16, § 1451, 1453 to 1464). A system for managing energy and other major industrial facility development in coastal zones must be established, (2) a Facility Siting Act which allows advance planning before an application, and certification procedures for a specific facility, and a monitoring system to ensure certification compliance, (3) a comprehensive land use statute which regulates all types of developments with potential adverse impacts, and (4) an Environmental Protection Act, which provides for complete review of development impacts. In many states without such a statute the National Environmental Policy Act of 1969 (16 U.S.C. § 6501 et al.) plays a major role in facility development through the various federal permit requirements necessary before construction.

[3] Based on the author's analysis of existing siting processes, this conclusion is not much different than that reached by Journey in his 1972 article. The problem centers

around defining what a siting process is to accomplish. One part of that problem is defining the role to be played by state, industry and public in the regulatory process. Generally speaking, power plant siting has been concerned with how the utility performs the task of rendering service not whether the service rendered is the optimal in terms of social welfare, resource development or other types of criteria. Drexel D. Journey, "Power Plant Siting: A Road Map of the Problem." Ibid., pp. 273-5.

[4] The prerequisite of an effective siting process is the implementation of a continuous state-wide planning system which considers local, state, regional and national factors and yet allows state control over areas of critical concern. The key to management is the flexibility that such a system can provide to resource decision makers.

The "Final Report of the American Bar Association's Special Committee on Environmental Law" states that such a system should include: ". . . a regulatory control such as zoning which is rigid and not amenable to constant change, and two, a system of resource allocation (i.e., basic planning) which is flexible to meet needs." A system of land use control which provides regulation of areas of critical state concern yet flexible to allow control by local governments of areas that are not of critical state concern is an example. There should be areas under control by only the state, others controlled primarily by local governments, and finally areas controlled jointly by state and local governments. Hawaii has a system which typifies this approach. In this case, the state is 'zoned' with one of four categories: "agricultural, rural, urban, and conservation districts." The first two categories are controlled jointly by both county and state; the urban districts are controlled by the counties, and the conservation districts are controlled by the state.

Effective use of the principle of flexibility revolves around four factors: expertise, responsibility, experience and other endeavors. (These were identified in Chapter 3, see note 1.) James Nealbrod, "Industrial Site Selection: Existing Institutions and Proposals for Reform," Ibid., pp. 442-3; Hawaii Land Use Law (Hawaii Rev. Stat. Chapter 205, Part I); Lewis Bart Stone, "Power Plant Siting: A Challenge to the Legal Process," Ibid., p. 23.

[5] Different key states can be assessed according to how well they fulfill the various phase requirements. Key states can be defined as those which best meet the requirements of each element and its components. Based on the analysis of other states, a range of options will be provided.

[6] The strength of a forecasting provision has been presented in terms of its components and the extent to which they contribute useful information to analyze the questions of need and alternatives.

[7] Kentucky, Minnesota, New York, Ohio, Oregon have all passed both siting and energy statutes, California uses a combined siting and energy statute. California (Pub. Res. Code § 25500 et. seq.); Kentucky (K.R.S. § § 278,020, .025, .029), Minnesota (Minn. Stat. § 116H et al. (1974)); New York (Public Service Law Articles VII and VIII; SB-59186 (April 6, 1978); Ohio (O.R.C. Chapter 4906 (1977)); Oregon (O.R.S. § § 469 et. seq.).

[8] Another mechanism to coordinate siting and energy responsibilities not discussed here is the passage of a Coastal Zone Management Act and associated program. Due to the requirements of the federal Coastal Zone Management Act of 1976, (CZMA), (U.S.C. 16 § 1451 to 1464) energy and other major facilities locating within the coastal zone must meet rigid requirements for both location and construction. The thrust of the federal CZMA is the utilization of a planning framework to assess major developmental impacts within the coastal zone.

[9] Interestingly enough, the passage of energy legislation frequently ensures that a variety of scenarios for forecasting are developed. Specifically, annual multiple year forecasts are more often the rule than is an annual or biennial forecast covering only one forecast period. A combined approach could result in a more complete fulfillment of the forecasting element if the institutional design factors: expertise, experience, responsibility, and other endeavors are considered. Refer back to note 1, Chapter 3.

[10] A distinction is necessary. The consideration of alternatives element provides that alternatives are reviewed before a formal proposal is submitted by industry. While most states look at certain alternatives, i.e., between thermal or nuclear power plants, or between oil, coal or gas fired plants, this review does not begin until after receipt of an application. (Even then, the alternatives which are considered are often limited to those evaluated by industry.) The key is not only the type of facility alternatives reviewed, but when they are analyzed.

[11] California (Public Res. Code, § 25600 et. seq.).

[12] "Normal" technologies include review of only certain types of facilities. For example, coal fired power plants vs oil fired power plants, or the analysis may focus on nuclear power plants. In any case alternatives do not extend to the commonly termed exotics (non-normal) such as solar or wind power generation facilities.

[13] Maryland's siting program is an extension of its coastal management program. It is called "The Power Plant Siting and Research Program" (Annotated code of Maryland § 3-302 et. seq.).

[14] The limitation or extent of alternative analysis is often determined by the existence of an environmental protection statute. However, the review of alternatives without specific funding and review capabilities only limits review to the basic 'normal' alternatives. See notes 10 and 12.

[15] Minnesota evaluates the effects of new generation and transmission technologies of power plants designed to minimize adverse environmental impacts. Minn. Stat. § 116C.53, (4), (b).

North Dakota evaluates energy conversion and transmission technologies and systems designed for minimizing adverse environmental effects (N.D. Century Code, Chapter 49-22-09 (3), also 49-22-05.1 (2)).

[16] The interdependency of siting elements can be seen through the feedback and feedforward mechanism. One good example of the feedforward mechanism is the relationship between the consideration of alternatives and presite review elements.

[17] Both alternatives and impacts identified in the previous element should feed forward to help identify or eliminate potential sites.

[18] Both California and Maryland use this process to evaluate alternatives and identify potential impacts before certification begins. In addition, these states also integrate any alternative technology studies into the review of sites. California: (Public Resources Code Division 15, § 25514 and § 25600 et al.); Maryland: (A.C.M. Natural Resources § 3-303 and 304).

[19] Four basic land use orientations of siting can be identified as: (1) the minimization of adverse environmental impacts; (2) balancing environmental costs against social benefits; (3) measuring costs and benefits of a proposal against alternatives; and finally (4) a combination of these orientations. Mason Willrich, "The Energy-Environmental Conflict: Siting Electric Power Facilities," Ibid., p. 307.

[20] The three levels of acceptance can be summarized as: (1) An 'acceptable' decision is one in which the siting procedure applies all applicable laws and regulations throughout review processes and investigates those project aspects subject only to specifically expressed law, rule or regulation. (2) A 'balanced' decision goes one step further in requiring a balancing of established interests and parameters, empowering the decision agency to impose more stringent restraints on a facility than otherwise required by law or regulations. (3) A third approach is the 'best' decision method which ensures balancing within parameters as well as a further directive to minimize or maximize some particular aspect of a project, i.e., environmental protection, et cetera. Lewis Bart Stone, "Power Siting: A Challenge to the Legal Process," Ibid., pp. 31-2.

[21] This analysis is based on the definitions in Notes 19 and 20 and review of siting acts. Site banking and inventorying, while possibly achieving several desired land use objectives, limits choice to approved sites. On the other hand, area avoidance allows continued achievement of objectives by not approving a particular site until key questions have been extensively analyzed.

[22] Florida has a ten year cycle of review through its state land use statute (Florida Stat. Part II, § 403.507); New Hampshire has a five year site review process (N.H. R.S.A. Chapter 162F.5 et seq.).

[23] California Public Resources Code, Chapter 276, Division 15 § § 25500 et al.

[24] North Dakota Century Code, § § 49-22-05.1, 09.

[25] Vermont, through its "Act 250," regulates land usage and approves a broad range of activities based upon time, size, cost and other factors of development. For a summary of states with land use laws see Appendix 3, Table A. Vermont, Land Use Development Law. (Section 248, Chapter 30 V.S.A.).

[26] Rules of the Florida Department of Environmental Regulation, Chapter 17-17-09 and 10.

[27] These states provide for advance notice of intent: California (Public Resources Code Chapter 276, Division 15, § 25502); Montana (M.C.A. 75-20-214); Massachusetts (M.S.C. Chapter 164 § 69I); New Hampshire (Chapter 162F (4) and (5)); North Dakota (Century Code § § 49-22-07.1); Oregon (O.R.S. § § 469.330); South Dakota (S.D. Rev. Stat. § § 49-41B-5); Vermont (30 V.S.A. § 248 (d)); Wisconsin (Session Laws of 1975, Chapter 68, § 9).

[28] These states provide for preapplication conferences: Iowa (Pub. Utilities Code Chapter 476A § 24.8 (1)); South Dakota (S.D. Rev. Stat § 49-41B-5); Vermont (30 V.S.A. § 248 (d)); Wisconsin (Session Laws of 1975 Chapter 68, A.B. 463 § 9(g) Sept. 29, 1975).

[29] Three states: South Dakota, Vermont, and Wisconsin, have provisions for both advance notice and prehearing conferences. Within the state of South Dakota, advance notice is required at least six months before an application is filed, but, the prehearing conference is optional. On the other hand, Vermont and Wisconsin utilize both components in a combined hearing procedure. Facility (utility) construction plans and forecasts are received, evaluated and approved by the siting authority before a formal application is filed; South Dakota (Revised Statutes, § 49-41B.5 (1978)); Vermont (30 V.S.A. § 248 (d)); Wisconsin (Session Laws of 1975, Chapter 68, § 9 (g)).

[30] In California, for example, the notice of intent is analyzed, evaluated, and processed through a series of public hearings to determine any additional application information required by the Energy Commission. Similarly, within Massachusetts (depending on the type of facility), a notice of intent is filed from one to two years in advance of the formal application. Public hearings are held to ensure that accompanying long range plans comply with established Energy Facility Siting Council standards. A formal application may not be filed until the appropriate long range plan or forecast has been approved. California: (No specific time period for submission is stated, however, various timetables for review and hearings are established. Public Resources Code, § § 25503 to 25516); Massachusetts (General Laws, Chapter 164, § 69I et al.).

[31] See Note No. 7.

[32] Minnesota (Minn. Stat. § 116H.03, (1974)).

[33] This system is utilized in coordinating and cooperating various responsibilities of other state agencies. Ibid., § 116H.07.

[34] In addition this report includes need assessment criteria against which a proposed energy facility is evaluated. Ibid., § 116H.10.

[35] Several states (10) simply analyze industrial forecasts and long range plans. While some independent analysis occurs under the auspices of expert agency review, no unified evaluation is done. In other words, long range plans and forecasts are often submitted by industry and reviewed by responsible agencies, but there is no comparison with state generated forecasts, et cetera. Generally, there is no attempt to assess need until after a proposal is received.

Nine states (9) have no forecast or other need evaluation mechanisms. Under this approach, need is completely defined or assessed by industry. This is usually based upon an industrial assessment which is accepted as proof of need by the state. (See Table 2, Chapter 3).

[36] Most states provide additional information through application requests, but only a few rely upon the preapplication conference to gather data. This may be a clue to why nearly three-fourths of all existing siting processes require up to ninety or more days to review an application for completeness.

[37] Massachusetts (M.G.L. Chapter 164 § 69L (E)); Iowa (Iowa Code § 24-14(2)); Montana (1947 R.C.M. § § 70-807 (1977 Supplement); New York (Public Service Law, Article VIII § 143 (2)); North Dakota (Cent. Code § § 49-22–08); Ohio (O.R.C. Chapter 4906.06); South Carolina (S.C. Code An. § § 58-1811 (5)).

[38] The significance of a change is determined by the siting authority, who then decides what if any additional review is necessary. Until recently, Montana was the only state to require that a significant change, i.e., that which was not covered by the preferred or other alternatives, resulted in the submission of a new application, and triggered a new review process. The amendment provision has been changed. Now additional fees for extended studies or, ultimately, the submission of a new application, whichever is deemed fit by the Board of Natural Resources, is required. This is equivalent to other state provisions. H.B. 883, Ibid., Sec. 5 (1-3) 1978.

[39] Slightly over half of existing siting statutes give precedence to the required siting permit or certificate. In other words, once issued the certificate preempts all other state or local permitting authority. By design, such power would eliminate the occurrence of unnecessary overlap and delay, but it also creates dissatisfaction especially when any authority is preempted without cause. Thus, in order for the process to function, input from responsible state and local agencies must be included.

Interestingly, six out of nine states with a site selection method preempt local authority. This implies that responsible agencies have input through other means, for example, public hearings or comment on an application, et cetera. Florida (Rules of Department of Environmental Regulation, Chapter 17-17-10); Iowa (Pub. Utilities Code, § § 24.13 and 14); Maryland (Maryland Code § § 3-306.1); Minnesota (Minn. Stat. § 116C.61 (1)); New Hampshire (N.H. R.S.A. Chapter 162F:7(5)); Oregon O.R.S. § 469.400 (5)).

[40] Both Arizona and Kentucky rely heavily on the federal environmental impact statement as a basis of environmental review. This may also be the case in states without environmental protection laws, but no conclusive statement can be made.

[41] Flexibility is borne out by four factors: expertise, experience, responsibility and other endeavors. The choice of agency orientation also tends to reflect these factors by promoting general policies around which the different siting processes are designed. Thus, while direct separation of reviews is crucial, the reliance on support agencies is beneficial so long as the factors of coordination and centralization are considered.

[42] While it may be argued that siting criteria exist, it is not evident in a review of existing siting statutes. All states have certain categories of criteria, but these criteria are general in nature. If criteria weighting occurs it is through subjective valuation by the siting authority. Therefore, just as the question of need was defined early, so must evaluation criteria be established from the outset.

[43] Wyoming (W.S. § 35-12103 et seq. (1977)).

[44] Jack Van Baalen; Industrial Siting Legislation: "The Wyoming Industrial Development Information and Siting Act—Advances or Retreat?" Ibid., p. 33.

[45] This combination of elements can also be used to counter arguments of lead agency, joint agency and separate agency reviews discussed earlier. The described method attempts to use elements of each while providing for coordination over the final decision process.

[46] The ability of a siting process to address the questions of flexibility and coordination have much to do with the methods of funding and categories of facilities covered by the process. A discussion of these factors will be presented in a later section.

[47] The following discussion relates only to statutory authority granted to state authorities through provisions in a siting act, therefore this may not be an adequate representation of existing monitoring capabilities in various states. As a consequence, any discussion of monitoring beyond siting statutes is outside the scope of this paper.

[48] California (Pub. Res. Code § § 25600 et seq.); Maryland (Annoted Code of Maryland, § § 3-303, and 307).

[49] Florida grants monitoring responsibility to industry. (Rules of Department of Environmental Regulation, § § 17-17.13). The following states monitor facilities as

conditions for certification: New Hampshire (N.H. R.S.A. Chapter 162F:8(10) and 162H:5(III)); Montana (1947 R.C.M. § 70-820 (2)). The rest of the states monitor facilities to ensure compliance with laws or regulations on the environment, et cetera: Oregon (O.R.S. § § 469.500 (1-5)); Wyoming (W.S. § § 35-502.91).

[50] Wyoming Statutes (§ § 35-502.75 to .94 (1977)).

[51] Ibid., § 35-502.91.

[52] These states usually set fines at ten thousand dollars ($10,000) and impose additional penalties for successive violations or days of single violation. The penalty provision is set out as a separate section in each of these acts: Minnesota (Minn. Stat. § 116.C 68); Montana (1947 R.C.M. § 70-821); North Dakota (Cent. Code § 49-22-21); Ohio (O.R.C. § § 4906.99); South Dakota (S.D. Rev. Codes § § 49-41B-32); Wyoming (W.S. § 35-502; 92).

[53] Minnesota (Minn. Stat. § 116C:645); Montana (1947 R.C.M. § 70-818); New Hampshire (N.H. R.S.A. Chapter 162F:12 and 162H:13); North Dakota (Cent. Code § 49-22-20); Oregon (O.R.S. § 469.440); South Dakota (S.D. Rev. Codes § 49-41B-27 and 28); Wyoming (W.S. § 35-502.90.

[54] A tabular summary of funding and financing provisions is found in Appendix 3, Table C_5.

[55] Arizona (Ariz. Rev. Stat. Article 6.2 § 40-360.09); Arkansas (Ark. Stat. § 73-276.4 (g)); California (Pub. Res. Code § 25802); Connecticut (C.G.S. Chapter 276a § 16-50L(a)); Florida (Rules of Department of Environmental Regulation § 17-17.04 (3)(a)); Massachusetts (M.G.L. Chapter 164 § 69 H (4)); Minnesota (Minn. Stat. § 116C.69 (2) et. seq.); Montana (1947 R.C.M. § 70-806 (2)); New York (Pub. Ser. Law Article VIII § 142 (6)(a & b)); North Dakota (Cent. Code § 49-22-22 (1)); Ohio (Power Siting Commission Rules, PSC-5-11 (1974)); Oregon (O.R.S. 469.420 (1-3); South Dakota (S.D. Rev. Codes § 49-41B 12); Washington (R.C.W. § 80.50.71 (a)(b)); Wyoming (W.S. § 35-12-81 (b) and 83 (a-c)).

[56] For example, assessment can be made according to Kwh, BTUs, or other output measures. California (Pub. Res. Code § 25800 et seq.); Connecticut (C.G.S. Chapter 276A, § 16-50-U); Maryland (Annotated Code of Maryland, § 3-302 (a-c) (1977)); Minnesota (Minn. Stat. 116C.69 (3)); and Oregon (O.R.S. 469.420 (4)).

[57] Seven states appear to do this: Kansas, Kentucky, Nevada, New Hampshire, New Mexico, South Carolina, and Vermont.

[58] The full cost of certification is paid by the applicant in the state of Iowa (Iowa Code Chapter 276A.10 (1977)). Similarly, the cost of certification in South Dakota is split among responsible units of government and the applicant (S.D. Rev. Codes § 49-41B-9 (1977)).

[59] Maryland (Annotated Code of Maryland, § 3-302, 303 (1977)).

[60] California (Public Res. Code § 25800 et seq.); Connecticut (C.G.S. Chapter 276A § 16-50 (L)(a) and (V)); Minnesota (Minn. Stat. 116.C.69 (2),(3)(a)); Oregon (O.R.S. § 469.420 (1-4)).

[61] Funds are collected by the State Board of Equalization and deposited in a special account by the state Treasurer of California (Public Res. Code § 25800 et. seq.).

[62] $500 per $1,000,000 investment, but not to exceed an amount equal to $1000 per one million investment (Minn. Stat. § 116C.69 (2)).

[63] Base fee of $35,000, plus $1,000 per mile length (Minn. Stat., § 116C.69 (2a)).

[64] The assessment is based on the percentage of retail market share of kilowatt hour sales for all utilities, both in and out of the state multiplied by .666, and .333 respectively (Minn. Stat. 116C.69(3)).

[65] In Oregon, for example, Energy Facility Siting Council funding is based on a per site fee of $5000, plus an assessment ($.05) per kilowatt of net generation capacity or an amount equal to $1,000 for each $1 million investment in either case not less than $15,000. In addition, every year the holder of a certificate granted under the chapter are required to pay a fee based on: (1) generating capacity of (a) nuclear plants ($0.05 per kilowatt), (b) other plants ($0.01 per kw); (2) for energy facilities $300 for each $1 million investment of original cost. Further, the Department of Energy is financed through an assessment on electric (kwh), gas (therms) and petroleum (BTUs) produces as determined annually through budgetary proceedings (Oregon Rev. Stat. § 469.420 et. seq.).

[66] Siting Act coverage is limited to three categories of energy facilities. The first category is the regulation of power plants according to size, type and cost. Twelve states expand this to cover not only electric generation plants but associated facilities and electric or fuel transmission lines by different size, type, cost and length. Nine additional states add another category of coverage; fuel production plants according to size, type and cost. Only Wyoming's siting law controls both energy and other major industrial activities (Appendix 3, Table C_2). Whereas, energy facilities can be segregated by impacts because of relative size, type and/or cost, the same is not always true with other industrial plants. For example, where cost is often used as a cut off point it appears to be arbitrary. A facility just under the cutoff has as much potential for creating adverse environmental impacts as a facility just over that point. In other words, to include major industrial facilities in a siting process it is necessary to more accurately define what is meant for coverage and what is not. Jack Van Baalen, "Industrial Siting Legislation: The Wyoming Industrial Development Information and Siting Act—Advance or Retreat?" Ibid., pp. 30-1.

[67] If flexibility is emphasized the forecasting responsibility may be best accomplished through an energy act which places one agency in the expert position to assess need. On the other hand, if centralization is desired, the forecast capability ought to rest with the siting authority. Either choice involves contributory factors and problems should be recognized. See note 68.

[68] For example, forecasting by the same agency responsible for certification would reflect an institutional siting bias. Conversely, that capability given to an agency solely responsible for coordinating energy forecasts and evaluating need would tend to reflect a more independent assessment.

[69] Only one study was uncovered in the inventory of siting laws that deals with comprehensive criteria. It was to be conducted by U.R.S. Corporation for the Ohio Power Siting Commission. Details may be obtained from the Ohio Power Siting Commission, P.O. Box 1735, 361 E. Broad Street, Columbus, Ohio 43216.

[70] Jack Van Baalen, "Industrial Siting Legislation: The Wyoming Industrial Development Information and Siting Act—Advance or Retreat?" Ibid., pp. 78-101.

Chapter 5

[1] A structural overview of these developments was presented in Chapter One.

[2] Comments by Mike Mellow, chief author of the Major Facility Siting Act at Montana Wilderness Association's First Annual Environmental Law Seminar, Boulder, Montana, May 18, 1979.

[3] Dissatisfaction with the siting act has resulted in both major and minor changes. For example, the exemption of the DHES from the EIS requirement of MEPA was a major concession, whereas the filing of a joint application is of lesser magnitude. Concessions were made to protect the Act. Many of the changes resulted in tradeoffs necessary to maintain its integrity and substance.

Generally speaking, the Act is equivocal to procedural processes in several other states. In fact, aside from changes in action statements the process is not dissimilar to what it had been. Specific changes are mentioned in the analysis of changes and implications found in Appendix 4. HB. 883, 46th Montana Legislature, Second Session, 1979.

[4] Some of the amendments were necessary. For example, the duality of the authority between the DNRC and DHES and their respective boards was addressed. Amendments helped to clarify the responsibilities of the DHES and BHES by eliminating the MEPA requirement that they also do an environmental impact statement. Only one impact statement, covering all parts of the project, is necessary. Although other examples could be discussed, the point to be made is simple: amendments were usually

directed only at procedural clarifications and focused upon the softening of interpretive language.

[5] It should be noted that the recommendations presented here are not in order of importance. However, a generalized ranking will be provided in the recommendation summary.

[6] § 75-20-501 M.C.A. (1978).

[7] Ibid., § § 75-20-215 (1).

[8] The self fulfilling prophecy of need is that, once defined and determined, need assures that some facility will be built. This argument begs the question of appropriateness.

[9] This recommendation illustrates the feedback/forward benefits of the proactive approach. Completeness review by state agencies can focus on the content of requested information and not the submission of additional information to supplement a deficient application. For example, by discussing potential problems and reviewing applicant data before an application is filed, the BNRC, DNRC and others can identify defects before the process starts and request relevant information necessary. Similarly, the applicant knows ahead of formal application what information is anticipated and can identify potential defects or problems in its proposal.

[10] This problem was overlooked in recent amendments and has the potential of causing future delays which were the impetus for easing amendment restrictions. HB 883, Ibid., generally revising § 75-20-213 Section 5 (2).

[11] Established environmental standards for air and water quality are the most obvious. Emission control standards are an example. However, impacts to the ecological, social, and economic environments generally may not be subjected to established standards. In this case decisions should not be made solely on the basis of minimization, but also mitigation.

[12] HB. 883, Ibid., Section 19, revising § 75-20-402.

[13] First, compliance with general provisions of the siting act is enforced through civil penalties. While important, this provision does not readily promote environmental incentives for compliance. Similarly, revocation is provided for gross noncompliance with the Siting Act or certification agreements. Unfortunately, this method is extremely difficult to enforce once a facility is operating and as such does not alone promote effective compliance; HB. 883, Ibid., Section 19; revising § 75-20-503 3 (e), 4 (g), 6 (d), 8 (d); Final Environmental Impact Statement for Colstrip 3 and 4 and Associated Facilities. Department of Natural Resources and Conservation, 1976.

APPENDICES

APPENDIX 1

Ford Foundation Project and Study

The concern about the reactive nature of the siting process has led state officials to seek a possible funding source in order to finance a study on improving Montana's Siting Process. Through a series of preliminary proposals, the State received acknowledgment from the Ford Foundation of some interest in Montana's problems. A detailed grant proposal was submitted by the state to the Ford Foundation's Program for Policy Analysis for State Environmental Management. In April of 1978, the project was funded through a $39,000 grant from the Ford Foundation. The Foundation's money is being matched with a $45,000 in state "inkind" contribution.

Nature of the Project. The project consists of a cooperative effort by state government officials and Montana University System personnel to develop a methodology for establishing siting criteria for energy and other major industrial facilities in Montana. The Lieutenant Governor and Commissioner of Higher Education direct an Environmental Management Coordinating Committee composed of state agency and university personnel. The Committee was established to identify and define problem areas which require the formulation of statewide environmental policy. As such the Committee is also responsible for directing different task groups on policy projects concerning the environment.

Under the 'Ford Foundation Project Grant' five task groups were established. Each task group is directed by a faculty member, from either Montana State University or the University of Montana. In addition, a student fellowship and research assistantship was provided to conduct the research and writing for the reports. The task groups are then responsible for a siting research task, due by the dates noted: (1) Task A: the analysis of the statutory authority and regulatory framework that affects Montana siting decisions (February 1979), (2) Task B: a review of other states' attempts to develop siting processes and apply siting criteria (August 1979), (3) Task C: the development of a methodology for forecasting Montana's energy needs (January 1979), (4) Task D: the evaluation of available public participation programs for developing and applying siting criteria (November 1979), (5) Task E: the development of a methodology for weighting the importance of individual siting criteria (January 1979).

The project's strength revolves around the coordination of individual groups so that each task logically proceeds from or relies upon the other tasks. Such coordination is especially important to the final task (Task E), the development of a methodology for weighting the importance of individual siting criteria. The purpose of this paper is to fulfill the duties of Task B, the review of other states' attempts to develop siting processes and apply siting criteria.

Task B. Due to its responsibilities under the Major Facility Siting Act, the Energy Division of the Montana Department of Natural Resources and Conservation was chosen as the support agency for 'Task B'. While the stated objective of this task was a review of other states' attempts to develop siting processes and apply siting criteria, the Environmental Management Committee decided that the task group should address itself to the inventory and analysis of existing siting processes in other states. The task group designed the work to follow three steps: (1) information gathering over a three month period (July-September 1978); (2) inventory of existing processes (Draft report: Inventory of State Major Facility Siting Processes, January 1979); and (3) finally the analysis of those state processes, which constitutes this report (Analysis of State Major Facility Siting Processes; with Recommendations for Montana, August 1979). While the Energy Division supplied support for the three-month information gathering period, the Task Director and Graduate Assistant are responsible for the "Inventory" and "Analysis" Reports.[1]

Methodology. The initial work on the task began in July of 1978. In designing the data collection procedures, the following considerations were important:

(1) The regulatory powers which were entrusted to the state's public agencies;

(2) The location in state government where these regulatory powers were placed;

(3) The siting criteria which were identified, and how they were weighted;

(4) The determination of whether the state developed its own energy demand forecast or depended upon industrial information;

(5) The extent to which the public was involved in developing and applying siting criteria on a state wide basis;

(6) An independent evaluation of the strengths and weaknesses of the state's siting program.

Using these general considerations as a framework, an overview of the existing siting processes in the fifty states was sought.

For the inventory, the objective was to collect as much information as possible on the operation of existing state siting processes. A "siting process" was defined in the broad sense; not limited simply to a formal siting act nor directed only to public utilities. Rather, the intent was to review the regulatory powers of any state agency in any application, certification or permit process required before construction on an energy or major industrial facility can begin. The request for information was sent in letter form under the signature of Administrator of the Energy Division, Montana Department of Natural Resources and Conservation to three different agencies in each state. The agencies, or their equivalents were: The Office of the Governor, The Public

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[1] University representation for Task B was by Department of Political Science, Montana State University. The task director was Dr. Richard L. Haines, Acting Head, Dept. of Political Science, MSU, and the Graduate Assistant was Kevin J. Hart, candidate for Master of Public Administration, Dept. of Political Science, MSU.

Service Commission, and the Department of Natural Resources.[2] The information requested from these agencies included such documents as statutes, rules or regulations, assessment reports or policy papers which could help answer our questions in terms of the state's process governing facility planning and siting. In addition to requesting information, it was asked that these agencies supply a list of 'contact people' who could address any question arising from the study of how the states' siting process functioned.[3]

Other information sources were also tapped. A literature search of law review articles and computer search of existing information data banks was conducted through the State of Montana Library. While these sources were informative, they were not as useful as the materials supplied by the states.[4]

The inventory of existing siting processes was done by reviewing the material received from the different states. These materials were then condensed to provide a general overview of how each state process functions, what its requirements were and extent of state involvement in that process. The resulting document entitled "Inventory of State Major Facility Siting Process," January 1979, is the draft working document for the analysis phase.[5] Based on the information in this inventory, this report attempts to analyze the material and present recommendations for Montana.

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[2] Nancy D. Wright and Gene P. Allen, *The National Directory of State Agencies, 1976-1977*, Information Resources Press, Hower & Company, Washington, D.C.

[3] To ensure some response from every state a phone call was placed to those agencies who did not respond to the letter request.

The response from states was tremendous in both volume and effort. No state replied less than once, most states responded three or four times, while several states responded from six to eight times. Much of the data received was in the form of statutes, rules and regulations and general information materials. Few states sent policy paper or assessment reports primarily because no such documents existed or were readily available.

[4] The computer search failed to provide much useful information. A more extensive search, expanding the number of identification parameters may have proven more useful, however, the cost was prohibitive. The information uncovered was not pursued any further since much of the material was expensive, having to be duplicated from microfiche. The legal search turned up some good materials of specific nature dealing with a specific project in different states. However, no exhaustive research was possible, due to the lack of index materials which could be used in locating the law review articles. Overall, the project was too limited in time and money to fully utilize these resources.

[5] The document is similar to the Southern States Energy Board's Report *Energy Facility Siting in the U.S.* which is revised and published periodically. However, the

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'Montana Inventory' goes further in that it identifies and discusses all states with a "siting process" and is not limited to those with a specific siting act. This allows an overview of the major permit requirements in each of the states surveyed in terms of any certification or state approval process needed before construction may begin.

However, due to the changing circumstances of siting legislation in each of the states surveyed the document is limited to the conditions of the state at the time the information was received. Wherever possible the potential of a changing situation has been noted.

APPENDIX 2

Siting Questions

1. a) Does the state have a siting act which entrusts power to a state or other public agency to regulate the location and construction of major facilities?
   b) Without a specific act, does the state or any representative of the state require an application, certificate, or permit process before construction begins?

2. a) Does the siting legislation provide a direct mechanism for the development of a state siting plan and siting criteria?
   b) If so, how are those criteria weighted?

3. a) Does the siting legislation allow state involvement in the process of facility planning and site selection prior to evaluation of a specific application?
   b) Is a mechanism provided for joint planning and interaction between the state and industry in serving the public interest?

4. a) What is the scope of the siting process, i.e., is it limited to public utilities, or does it cover a broad spectrum of major industrial activities?
   b) Are associated facilities such as transmission lines, pipelines, and substations covered?
   c) What is the range of alternatives considered, i.e., solar, wind, biomass, nuclear, hydro, thermal, electric, et cetera?

5. a) Is there provision for one step approval of applications and authorization for the siting agency to coordinate activities of various state, local, regional, and federal agencies with siting responsibilities or jurisdiction?
   b) What is involved in the application, certification or permit process in terms of time for evaluation, recommendations and appeals procedures?
   c) When does the process begin and how long does it take?

6. a) Is the state authorized (required) to generate its own energy demand data and perform subsequent forecasting tasks relating to an independent assessment of need for a proposed facility?
   b) Is there an adequate provision for staffing and funding to carry out energy demand analysis, comprehensive site inventory studies, and application evaluations?

7. To what extent is planning involved in the siting process in terms of demand forecasts, siting options, definition of need, public involvement, data collection and site review?

8. a) Are long range plans required from any person intending to construct a major facility in the state?

b) Is there an enforcement clause or similar mechanism to ensure compliance with the intent of these plans?

9. a) Is the question of need dealt with at any stage during the siting process?
   b) For each type of facility development, is there a framework which establishes how the proposed project will be determined?
   c) Does this framework consider local, state, regional, national and international needs?
   d) Is there a differentiation made between commodities, for example, between electricity and natural gas in terms of base loads, peak loads, and reliability?

10. a) Is there a provision for public involvement in (1) designation of siting priorities, (2) development of siting criteria, and (3) other types of site planning?
    b) Is the public informed or allowed the opportunity to become involved in facility plans at an early stage in the process before major decisions have been made?

APPENDIX 3

Guide

The following tables categorize the siting provisions of states surveyed for this report. Specifically, Tables A and B are concerned with statutes and covered facilities of all fifty states. Conversely, Tables C_1 to C_5 deal with only states which have specific siting statutes. As such, the tables categorize the states into groups with like or similar statutory provisions.

Tables A and B should be used together. The statutory authority provided by a number of statutes may combine to allow a broader range of coverage. Therefore, the covered facilities are not always only or specifically covered by a siting statute. Rather, overlapping authority of two or more statutes may exist. A further breakdown of specific requirements of a siting law are not provided here.

Tables C_1 to C_5 summarize the important provisions of states with existing siting statutes. These tables and those presented in Chapters 3 and 4 help contain most of the major elements of different state siting procedures. In most cases the categories are mutually exclusive. However, in some cases two or more 'Xs' under the same major category also help to further define different state provisions. For example, in Table C_1, Arizona's decision agency has a mixed bag orientation, is over eleven members and consists of agency officials, appointed public members and others because of expertise. Due to the number small differences between states general categorizations were the most effective method of presentation.

Table A. Categories of statutory control over major facilities

	N/F	SS	EP	LU	CM	AP	EN	Oth
Alabama	X							
Alaska			X		X	X		
Arizona		X						X
Arkansas		X						X
California		X	X	X		X		
Colorado	X							
Connecticut		X	X			X		
Delaware			X	X	X		X	
Florida	X	X	X	X				
Georgia					X	X		X
Hawaii				X	X			X
Idaho	X							
Illinois			X					
Indiana	X							
Iowa		X		X				
Kansas		X						
Kentucky		X					X	
Louisiana			X					
Maine				X	X	X		
Maryland		X			X			
Massachusetts		X						
Michigan					X	X		
Minnesota		X	X			X	X	
Mississippi	X							
Missouri	X							
Montana		X	X			X		
Nebraska								X
Nevada		X						
New Hampshire		X						
New Jersey					X	X	X	
New Mexico		X						
New York		X	X				X	
North Carolina					X			
North Dakota		X						
Ohio		X	X				X	
Oklahoma	X							
Oregon		X					X	
Pennsylvania	X							
Rhode Island	X							
South Carolina		X			X			
South Dakota		X	X					
Tennessee								X
Texas			X		X			X
Utah	X							
Vermont		X		X				
Virginia	X							
Washington		X						

Table A (continued)

	N/F	SS	EP	LU	CM	AP	EN	Oth
West Virginia	X							
Wisconsin		X	X			X		
Wyoming		X				X		X

Key:
N/F – numerous and fragmented control
EP – environmental protection statute
CM – coastal management statute or program
EN – energy statute
SS – siting statute
LU – land use statute
AP – administrative procedures statute
Oth – other types of statutory or regulatory control

Table B. Facility coverage by each state

		Energy		Industrial plts by:		
	Gen Plt	Trans line	Fuel plts	Type	Size/cost	Other
Alabama	X	X				
Alaska	X				X	X
Arizona	X	X				
Arkansas	X	X				
California	X	X	X		X	X
Colorado						X
Connecticut	X	X				
Delaware						X
Florida	X					
Georgia						X
Hawaii						X
Idaho						X
Illinois						X
Indiana						X
Iowa	X					
Kansas	X					
Kentucky	X	X				
Louisiana						X
Maine	X	X	X	X	X	X
Maryland	X	X				
Massachusetts	X	X	X			
Michigan						X
Minnesota	X	X				
Mississippi						X
Missouri						X
Montana	X	X	X		X	
Nebraska	X	X				
Nevada	X	X				X
New Hampshire	X	X	X			
New Jersey						X
New Mexico	X	X				
New York	X	X	X			
North Carolina						X
North Dakota	X	X	X			
Ohio	X	X	X			
Oklahoma						X
Oregon	X	X	X			
Pennsylvania						X
Rhode Island						X
South Carolina	X	X				
South Dakota	X	X				
Tennessee						X
Texas						X
Utah						X
Vermont	X	X				
Virginia						X

Table B (continued)

		Energy			Industrial plts by:	
	Gen Plt	Trans line	Fuel plts	Type	Size/cost	Other
Washington	X	X	X			
West Virginia						X
Wisconsin	X	X				
Wyoming	X	X	X	X	X	X

Key:
- Energy facilities
  - gen plt – electric generation plants by size, type or cost
  - trans lines – electric of fuel transmission lines by size, type, cost or length
  - fuel plts – fuel production plants by size (output), type, or cost
- Industrial facilities by
  - type of facility or activity
  - size or cost of facility, i.e., output, et cetera

Table C_1. Siting Law Provisions—Decision Authority

		Agency Type			Agency Size				Composition			
	Stops	Envir	Econ	MB	Agn	3-5	7-16	Oth	Off	App	Exp	Oth
Arizona	1			X				X	X	X	X	
Arkansas	2		X		X							X
California	1			X		X				X		X
Connecticut	1			X			X		X	X		
Florida	2	X					X			X		
Iowa	1		X		X							X
Kansas	1		X		X							X
Kentucky	2	X	X		X							X
Maryland	1	X	X		X							X
Massachusetts	1			X			X		X	X	X	
Minnesota	1	X						X	X	X		
Montana	1	X					X			X	X	
Nevada	1		X		X							X
New Hampshire	1		X		X							X
New Mexico	1		X		X							X
New York	1		X		X							X
North Dakota	1		X		X							X
Ohio	1						X		X	X		
Oregon	1			X			X			X		
South Carolina	1		X		X							X
South Dakota	1		X		X							X
Vermont	1		X		X							X
Washington	2			X				X				X
Wisconsin	2		X		X							X
Wyoming	1			X			X			X		

Key:

Type (orientation)
- Envir = environmental
- Econ = economic
- MB = mixed bag

Size
- Agn = agency size
- Oth = other

Composition
- Off = agency official
- App = appointed members
- Exp = experts
- Oth = other

Table C$_2$. Siting Law Provisions–Time Limits

	Completeness (days)			Impact Evaluation (months)				Final Decision (months)			
	30	31-90	NS	1-3	4-12	13-24	NS	3-12	13-18	Oth	NS
Arizona			X				X	X			
Arkansas		X			X						X
California		X			X				X		
Connecticut	X				X				X		
Florida	X				X				X		
Iowa		X			X				X		
Kansas			X		X			X			
Kentucky			X	X							X
Maryland			X				X				X
Massachusetts			X		X					X	
Minnesota			X		X				X		
Montana		X				X				X	
Nevada			X				X				X
New Hampshire		X			X				X		
New Mexico			X				X			X	
New York			X			X				X	
North Dakota	X			X				X			
Ohio		X					X				X
Oregon		X				X				X	
South Carolina		X					X				X
South Dakota		X					X		X		
Vermont	X						X				X
Washington		X					X				X
Wisconsin		X			X					X	
Wyoming	X				X				X		

Key:
NS – no period specified
Oth – other period

Table C3. Siting Law Provisions—Forecasts and Site Acquisition

	Industrial forecast/LR plans period (years)							Acquisition authority				
	NR	1	2-4	5	10	15	20	EC	PN	AW	EM	Oth
Arizona					A			X				
Arkansas			A							X	X	
California				B	B		B					X
Connecticut					A		B				X	
Florida					B			X				
Iowa		A							X		X	
Kansas	X										X	
Kentucky	X							X	X			
Maryland					A							X
Massachusetts		A			B						X	
Minnesota						B					X	
Monana					A			X				
Nevada	X									X		
New Hampshire					A	A					X	
New Mexico	X										X	
New York					A				X			
North Dakota					A			X				
Ohio					A			X	X			
Oregon					A						X	
South Carolina					A						X	
South Dakota					A							X
Vermont	X											X
Washington	X										X	
Wisconsin					B							X
Wyoming				A	A							X

Key:

NR – no report required

DN – certificate of public convenience and necessity

EM – eminent domain powers

EC – certificate of environmental compatibility

AW – air and water quality permits

Oth – other method

Table C4. Siting Law Provisions—Participation and Appeals

	Participation of Parties by							Appeals Procedure		
	Notice				Involvement					
	NP	Apl	AN	Oth	PP	LP	Oth	DB	CS	Oth
Arizona				X	X				X	
Arkansas	X	X			X	X			X	
California				X			X		X	
Connecticut	X	X			X			X		
Florida				X			X		X	
Iowa				X	X					
Kansas	X						X		X	X
Kentucky	X						X	X	X	
Maryland				X			X		X	
Massachusetts	X				X					X
Minnesota		X			X	X	X		X	
Montana	X				X			X	X	
Nevada	X				X			X	X	
New Hampshire	X	X			X			X	X	
New Mexico				X			X	X	X	
New York	X				X				X	
North Dakota		X			X	X			X	
Ohio	X				X				X	
Oregon	Z	X	X		X				X	
South Carolina				X	X				X	
South Dakota			X		X				X	
Vermont				X		X	X		X	
Washington				X			X			X
Wisconsin	X			X		X				X
Wyoming	X	X	X		X	X		X	X	

Key: notice given in:
NP – newspaper
Apl – by copy of application
AN – advance notice to party
Oth – other means

Involvement is by:
PP - party to preceeding
LP – limited participation
Oth – other means

Appeals to:
DB – decision body
CS – court system
Oth – other method

Table C_5. Siting Law Provisions–Criteria Type and Funding Sources

	Criteria Types			Funding Provisions						
				Fee types				Process financing		
	Gen	CxC	NS	None	Flat	Min	Max	Fee	Assmt	None
Arizona			X		X			X		
Arkansas	X				X					X
California	X	X					X	X	X	
Connecticut	X						X	X	X	
Florida	X	X			X			X		
Iowa		X		X						X
Kansas			X	X						X
Kentucky			X	X						X
Maryland		X		X					X	
Massachusetts		X					X	X		
Minnesota	X	X					X	X	X	
Montana	X	X					X	X		
Nevada		X		X						X
New Hampshire	X	X		X						X
New Mexico			X		X				X	
New York		X			X			X		
North Dakota		X				X	X	X		
Ohio		X				X		X		
Oregon			X			X		X	X	
South Carolina	X	X		X						X
South Dakota	X	X					X	X		
Vermont		X		X						X
Washington		X					X	X		
Wisconsin		X					X	X		
Wyoming	X	X					X	X	X	

Key: Criteria types
Gen – general criteria provided by statute
CxC – responsible agency, etc., develops and evaluates projects according to those criteria
NS – no specific criteria are mentioned

Fee types
None – no fee required
Flat – one fee is charged for everything
Min – minimum fee is e established with incrcreases for varying size, type and cost
Max – fee assessed according to cost, size or type but cannot exceed a maximum limit

Financing
Fee – cost covered by fee
Assmt – cost covered by an additional assessment or tax
None – no funding source is mentioned

APPENDIX 4

Montana's Siting Procedures and Information Requirements

During 1979, the 46th Montana Legislature made several changes to Montana's Major Facility Siting Act. These amendments were a response to the experience gained from the Colstrip Case. Many of the changes are directed at perceived defects in procedures that resulted in costly and timely delays in certifying Colstrip Generation Units 3 and 4. In many respects this is not the case. Amendments to the Siting Act have not addressed structural deficiencies. The existing process and information requirements are presented below. In cases where changes have been made they are identified by reference to relevant sections in the footnotes.

Annual ten year forecasts and long range plans must be filed with the Department of Natural Resources and Conservation (DNRC) and its administrative body, the Board of Natural Resources and Conservation (BNRC). This document is reviewed by the DNRC and interested agencies and is available for inspection.[1]

Advance notice of intent may be given,[2] but certification begins when a joint application is filed with the BNRC, the Board of Health and Environmental Sciences (BHES), the DNRC and the Department of Health and Environmental Sciences (DHES).[3] Copies of the application are also served on various parties and agencies as specified in the Act.[4] DNRC and DHES both review an application for completeness, and within ninety days the application must be approved or rejected. If rejected, a written notice of the deficiencies is supplied to the applicant who may submit a corrected application. Secondary approval must be made within thirty days.[5]

An application is accompanied by a fee calculated on the estimated cost of review. The fee is not to exceed a ceiling based upon a percentage of the project's cost.[6] Credit may be given for environmental studies, baseline data, and other studies done by the applicant through a reduction in the required fee. The DNRC must, however, evaluate the applicability, validity or usefulness of this data before any credit is given.[7] Application amendments may be made at any time before DNRC's final EIS is presented to the BNRC. Amendments are subject to BNRC review to determine the effect of any project changes on analysis and are subject to additional filing fees, or the submission of a new application.[8]

Once an application is accepted, intensive study and evaluation of the proposed facility and its effects, considering all applicable criteria,[9] is undertaken. The DNRC has responsibility for the environmental impacts of all aspects of the project, but the DHES and BHES must approve the project in terms of air and water quality standards. Other agencies also comment on their areas of expertise.[10] The DHES and BHES must study only those impacts that enable them to issue a decision on air and water quality.[11] Time limits for decisions by DHES, BHES,[12] DNRC and BNRC[13] are provided.

A prehearing conference may be held before the start of hearings, to clarify, to define, or to resolve issues of fact and conclusions of law.[14] If a conference is held the presiding examiner must issue an order detailing the outcome of the meeting.[15] Public hearings are then held but they may not exceed a period of nine months unless extended by the BNRC.[16]

Joint hearings may be held by the BNRC and BHES.[17] Such hearings are restricted to time constraints of the separate boards.[18] An examiner may also preside over these hearings.[19]

The BNRC has final permit approval authority. Based upon established criteria, recommendations by the DNRC, DHES, BHES and/or hearings examiner,[19] the Board makes a decision.[20] Once issued, a certificate preempts almost every other permit authorities.[21]

It is the responsibility of the BNRC, BHES, DNRC and DHES to monitor all certified energy generation or conversion facilities to ensure compliance. A monitoring plan for each certified facility is required by the Siting Act.[22]

Judicial review of the decision is provided according to contested case proceedings established by Montana's Administrative Procedures Act.[23] Violations of any provision of the siting act or certificate result in civil penalties and/or possible revocation of the permit.[24] New sections to the siting act limit appeal procedures. For example, no order by the board may be stayed or suspended without notice to all parties or a finding that significant irreparable damage would otherwise result.[25] Similarly, an optional surety bond may be required to help ensure against appeal of correct but unfavorable decisions by one party.[26]

FOOTNOTES–APPENDIX 4

[1] This section was amended to exempt rural cooperatives from the forecast provision by substituting the plans submitted under the federal REA requirements for those of the Siting Act. Additionally, no person may file an application unless the facility has been included in long range plans for two previous years. HB 883. Ibid., Section 22, amending § 75-20-501, M.C.A., (1978).

[2] Advance notice, or notice of intent may be submitted twelve (12) months in advance of actual filing at the option of the applicant. If such action is taken it results in a five (5) percent reduction of the filing fee. § 75-20-214, M.C.A., (1978).

[3] A joint application provision was added in 1979. Before the amendment, separate applications had to be submitted to both the BNRC, and BHES for issuance of respective permits. HB 883, Ibid., Section 4, revising § 75-20-211, M.C.A. (1978).

[4] County commissioners, city or county planning boards, applicable federal agencies and these state departments or agencies receive a copy: Environmental Quality Council; Public Service Regulation; Fish, Wildlife and Parks; State Lands; Community Affairs; Highways; and Revenue. Ibid., Section 4, revising § 75-20-211.

[5] Ibid., Section 8, revising § 75-20-216.

[6] This was changed from an inflexible declining scale based on estimated project cost. Fees are now based on estimated cost of review. However, the percentages remain the same, for example: 2% of any estimated cost up to $1 million; plus 1% of any estimated cost over $1 million and up to $20 million; plus 0.5% of any estimated cost over $20 million and up to $100 million; plus 0.25% of any amount of estimated cost over $100 million and up to $300 million plus .125% of any amount of estimated cost over $300 million. Ibid., Section 7, revising § 75-20-215, M.C.A. (1978).

[7] Ibid., Section 7 (B).

[8] Previously any amendment, unless covered by the alternatives submitted with the original application, resulted in a new application which would trigger the entire review process all over again. Ibid., Section 5, revising § 75-20-213.

[9] Ibid., Sections 15, 23, revising § 75-20-301 and 503 respectively.

[10] Other departments include: Highways, Community Affairs, Fish, Wildlife, and Parks, State Lands (new), Revenue (new), and Public Service Commission. Ibid., Section 8 (5), revising § 75-20-216 (5).

[11] Previously, the DHES had to prepare an environmental impact statement (EIS) under Montana's Environmental Policy Act (MEPA), however, amendments have changed that responsibility. Ibid., Section 8 (2).

[12] One year for DHES determination; 6 months for BHES to decide on DHES recommendation; Ibid., Section 8 (2).

[13] DNRC has 22 months to make a determination on most power plants or other covered energy plants (previously 2 years); and 1 year for transmission lines or other covered transmission facility only; the BNRC must make a decision on the DNRC recommendation within nine months. Ibid., Section 8 (4).

[14] Ibid., Section 12 (2 to 5), generally revising § § 75-20-220 et. seq.

[15] Ibid., Section 12 (6 to 8).

[16] Ibid., Section 12 (9).

[17] Ibid., Section 10, revising § 75-20-218 M.C.A. (1978).

[18] See notes 19 and 20.

[19] Ibid., Section 12 (10), revising § 75-20-220 M.C.A., (1978).

[20] Ibid., Section 15, revising § 75-20-301.

[21] Ibid., Section 16, revising § 75-20-302.

[22] Ibid., Section 18, revising § 75-20-401.

[23] Costs of the plan are shared by state and federal agencies and the applicant. Ibid., Section 19, revising § 75-20-401.

[24] Civil penalties of $10,000 per violation, each day constituting a separate offense, Ibid., Section 21, revising § 75-20-408; Revocation is provided in § 75-20-403, M.C.A. (1978).

[25] Ibid., Section 20, revising § 75-20-406.

[26] Ibid., Section 24.

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